

Service Manual

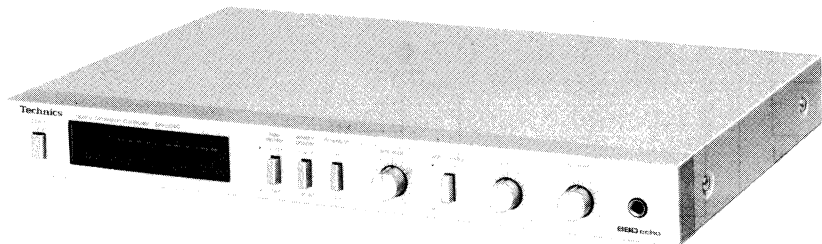
Space Dimension Controller

SH-8040

[E], [EG], [EK], [Ei], [EH],
[EB], [EF], [XA], [XL]

SH-8040(K)

[E], [EG], [EK], [Ei], [EH],
[EB], [EF], [XA], [XL]



- * The cabinet and front panel are available in black color and silver types.
- * The black type model is provided with (K) in the Service Manual.

Areas

- * [E] is available in Switzerland and Scandinavia.
- * [EG] is available in F.R. Germany.
- * [EK] is available in United Kingdom.
- * [Ei] is available in Italy.
- * [EH] is available in Holland.
- * [EB] is available in Belgium.
- * [EF] is available in France.
- * [XA] is available in South East Asia, Oceania, Africa, Middle Near East and Central South America.
- * [XL] is available in Australia.

English

Specifications

Specifications are subject to change without notice for further improvement.

(DIN 45 500)

Frequency response	
line in, tape	6 Hz~50 kHz, +0 dB, -3 dB
mic	20 Hz~30 kHz, +0 dB, -3 dB
Maximum output voltage (T.H.D. 0.2%)	
3.5V (20 Hz~20 kHz)	
Rated total harmonic distortion	
line in	0.003% (20 Hz~20 kHz, 150 mV output)
Input sensitivity	
line in	150 mV
tape	180 mV
mic	0.5 mV
Rated output voltage	
line out	150 mV
rec out	150 mV
Signal to noise ratio	
line in	99 dB
Maximum input voltage (T.H.D. 0.2%)	
line in	8V (1 kHz)
mic	130 mV (1 kHz)
Channel separation, 1 kHz	
60 dB	
Channel balance, 250 Hz~6300 Hz	
±1.0 dB	

Input impedance	
line in, tape	22 kilohms
mic	10 kilohms
Output impedance	
line out	600 ohms
rec out	600 ohms
Dimension controller	
echo time	64 msec.
sound image localization	30 deg. (backward)
Overall gain	
0 ±1 dB	

■ GENERAL

Power consumption	
11W	
Power supply	
AC 50 Hz/60 Hz, 110V/120V/220V/240V	
Dimensions (W×H×D)	
430 × 53 × 282 mm	
(16-15/16" × 2-3/32" × 11-2/32")	
Weight	
3.2 kg (7.1 lb.)	

Note: Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

SH-8040

Deutsch

TECHNISCHE DATEN

Spezifikationen Können infolge von Verbesserungen ohne Ankündigung geändert werden.

(DIN 45 500)

Frequenzgang	
line in, tape	6 Hz~50 kHz, +0 dB, -3 dB
mic	20 Hz~30 kHz, +0 dB, -3 dB
Maximale Ausgangsspannung (T.H.D. 0,2%)	
3,5V (20 Hz~20 kHz)	
Nennklirrfaktor	
line in	0,003% (20 Hz~20 kHz, 150 mV Ausgang)
Eingangsempfindlichkeit	
line in	150 mV
tape	180 mV
mic	0,5 mV
Nennausgangsspannung	
line out	150 mV
rec out	150 mV
Geräuschabstand	
line in	99 dB
Maximale Eingangsspannung (T.H.D. 0,2%)	
line in	8V (1 kHz)
mic	130 mV (1 kHz)
Übersprechdämpfung, 1 kHz	
60 dB	
Kanalabweichung, 250 Hz~6300 Hz	
±1,0 dB	

Eingangsimpedanz	
line in, tape	22 kΩ
mic	10 kΩ
Ausgangsimpedanz	
line out	600 Ω
rec out	600 Ω
Raumklangregelung	
Nachhall	64 msec.
Lokalisierung	
30 ° (rückwärts)	
Verstärkung	
0 ±1 dB	

■ ALLGEMEINE DATEN

Leistungsaufnahme	
11W	
Netzspannung	
Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V	
Abmessungen (B×H×T)	
430 × 53 × 282 mm	
Gewicht	
3,2 kg	

Bemerkung: Der Gesamtklirrfaktor wurde mit einem digitalen Rauschspektrometer (Anlage H.P. 3045) gemessen.

Francais

CARACTERISTIQUES

Sujet á changement sans preavis.

(DIN 45 500)

Réponse de fréquence	
line in, tape	6 Hz~50 kHz, +0 dB, -3 dB
mic	20 Hz~30 kHz, +0 dB, -3 dB
Tension de sortie maximum (T.H.D. 0,2%)	
3,5V (20 Hz~20 kHz)	
Distortion harmonique totale	
line in	0,003% (20 Hz~20 kHz, sortie 150 mV)
Sensibilité d'entrée	
line in	150 mV
tape	180 mV
mic	0,5 mV
Tension de sortie nominale	
line out	150 mV
rec out	150 mV
Signal/Bruit	
line in	99 dB
Tension d'entrée maximum (T.H.D. 0,2%)	
line in	8V (1 kHz)
mic	130 mV (1 kHz)
Séparation des canaux, 1 kHz	
60 dB	
Equilibrage des canaux, 250 Hz~6300 Hz	
±1,0 dB	

Impédance d'entrée	
line in, tape	22kΩ
mic	10kΩ
Impédance de sortie	
line out	600Ω
rec out	600Ω
Compensateur ambiophonique	
délai d'echo	64 msec.
localisation de l'image sonore	
30 deg (Vers l'arrière)	
Gain	
0 ±1 dB	

■ DIVERS

Consommation	
11W	
Alimentation	
CA 50 Hz/60 Hz, 110V/120V/220V/240V	
Dimensions (L×H×Pr)	
430 × 53 × 282 mm	
Poids	
3,2 kg	

Remarque: On mesure la distorsion harmonique totale au moyen d'un analyseur de spectre digital (Système HP. 3045).

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

ESPECIFICACIONES

Estas especificaciones están sujetas a cualquier cambio sin previo aviso.

(DIN 45 500)

Respuesta de frecuencia

line in, tape 6 Hz~50 kHz, +0 dB, -3 dB
mic 20 Hz~30 kHz, +0 dB, -3 dB

Salida de voltaje máxima (T.H.D. 0,2%) 3,5V (20 Hz~20 kHz)

Distorsión armónica total nominal

line in 0,003% (20 Hz~20 kHz, salida de 150 mV)

Sensibilidad de entrada

line in 150 mV
tape 180 mV
mic 0,5 mV

Voltaje de salida nominal

line out 150 mV
rec out 150 mV

Relación de señal ruido

line in 99 dB

Voltaje máximo de entrada (T.H.D. 0,2%)

line in 8V (1 kHz)
mic 130 mV (1 kHz)

Separación de canales, 1 kHz

60 dB

Equilibrio de canales, 250 Hz~6300 Hz

±1,0 dB

Impedancia de entrada

line in, tape 22kΩ
mic 10kΩ

Impedancia de salida

line out 600Ω
rec out 600Ω

Control de dimensión

duración del eco 64 mseg.

ubicación de la imagen del sonido

30 grados (hacia atrás)

Ganancia

0 ±1 dB

■ GENERAL

Consumo de energía

11W

Alimentación de energía

CA 50 Hz/60 Hz,
110V/120V/220V/240V

Dimensiones (An.×Al.×Prof.)

430 × 53 × 282 mm

Peso

3,2 kg

Nota: La distorsión armónica total se mide con el analizador de espectro digital (sistema HP. 3045).

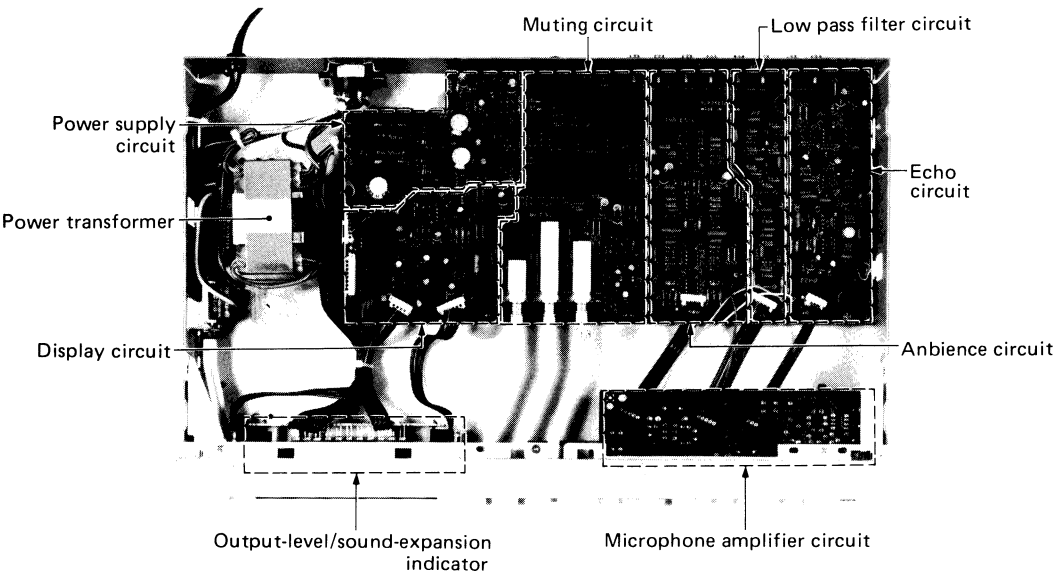
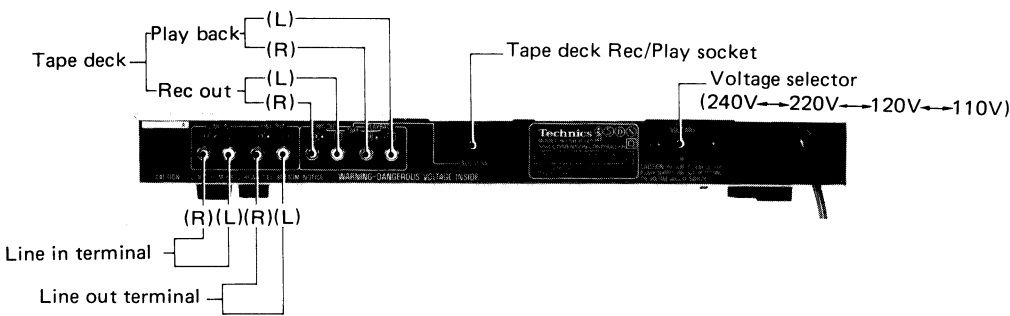
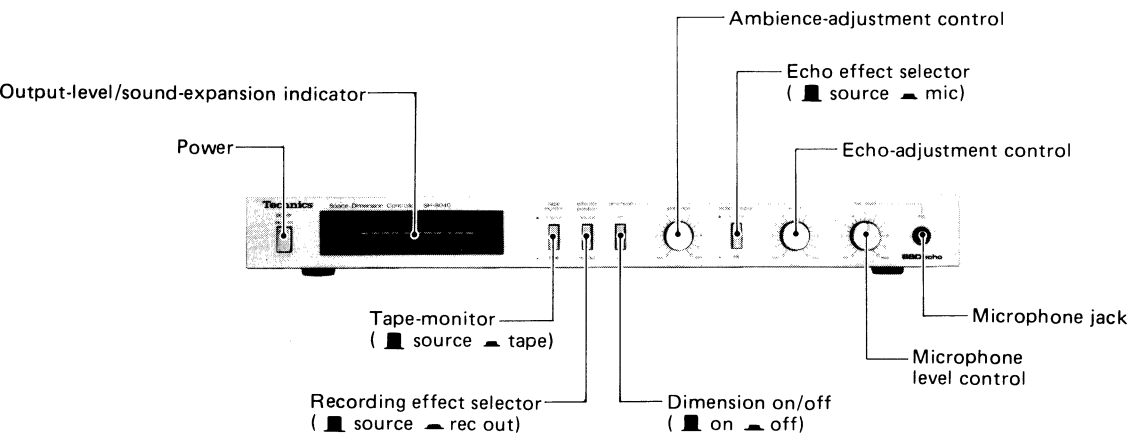
■ CONTENTS

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CIRCUIT BOARDS AND WIRING

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■ LOCATION OF CONTROLS

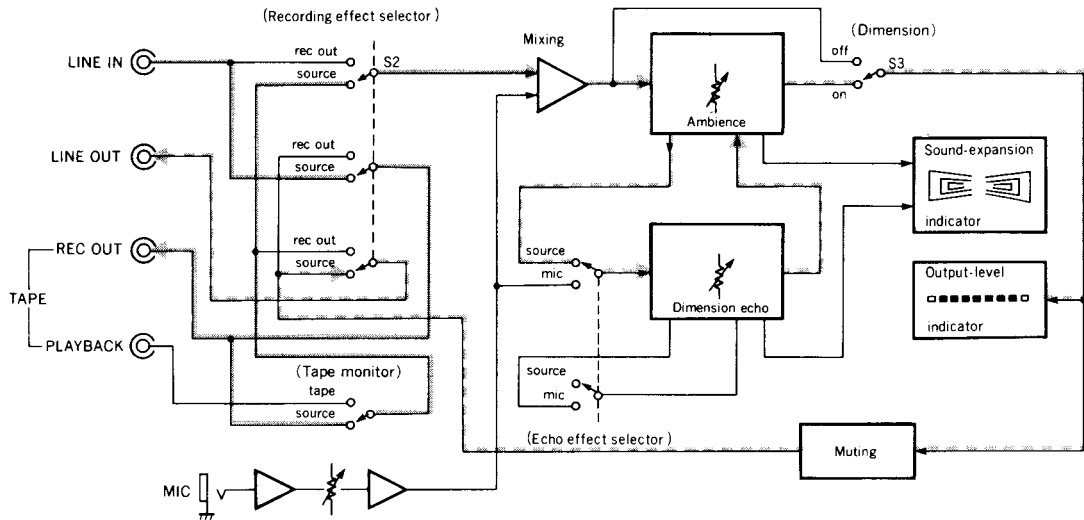


■ EXPOSITION OF SIGNAL LINE

※※※※※ Ambience signal line

1. Input signal at "LINE IN" Fig. 1

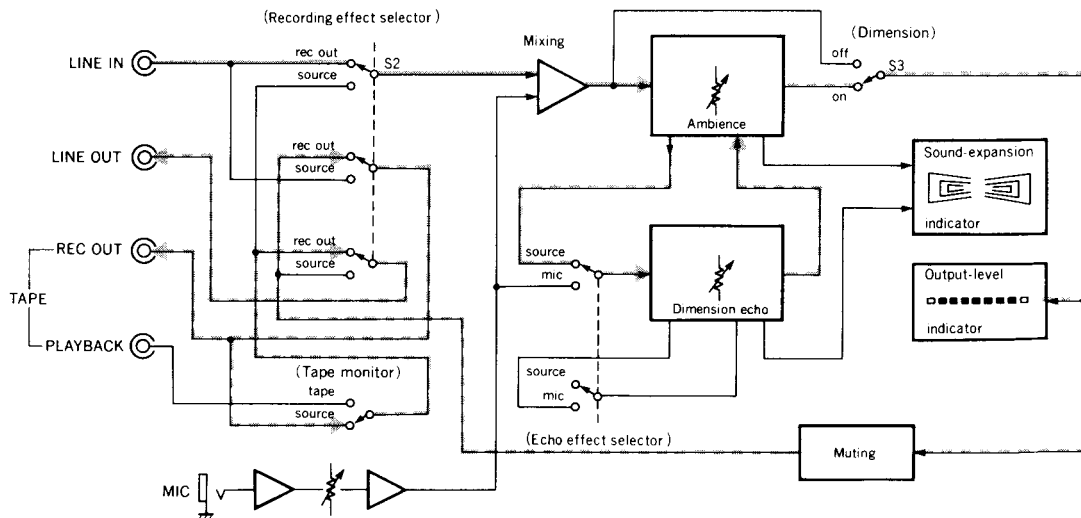
With recording effect selector and tape-monitor at source, signal having dimension effect is obtained at "LINE OUT", while signal is directly obtained at "REC OUT".



[Fig. 1]

2. Input signal at "LINE IN" Fig. 2

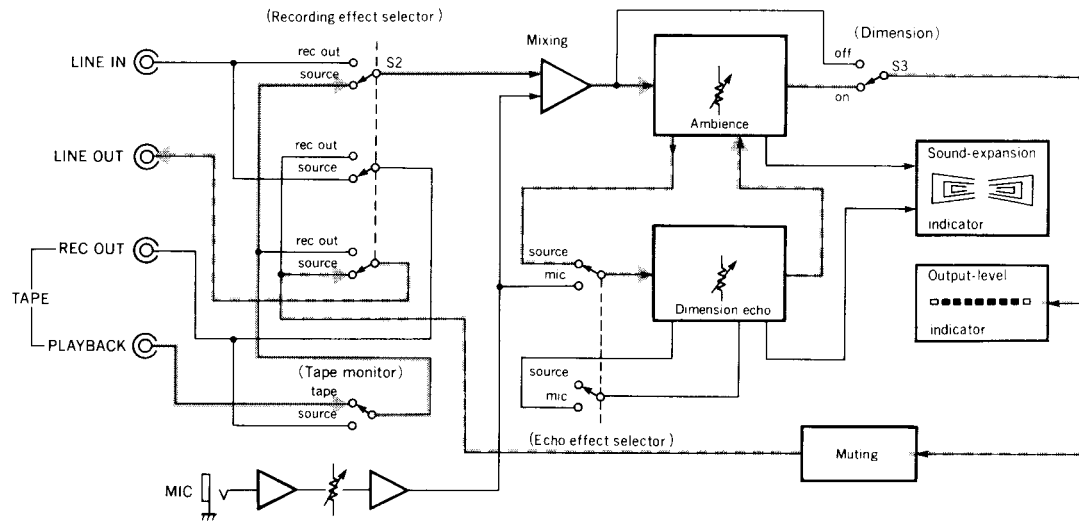
With recording effect selector at rec out and tape-monitor at source, signal having dimension effect is obtained at "LINE OUT" and "REC OUT".



[Fig. 2]

3. Input signal at "tape (PLAYBACK)" Fig. 3

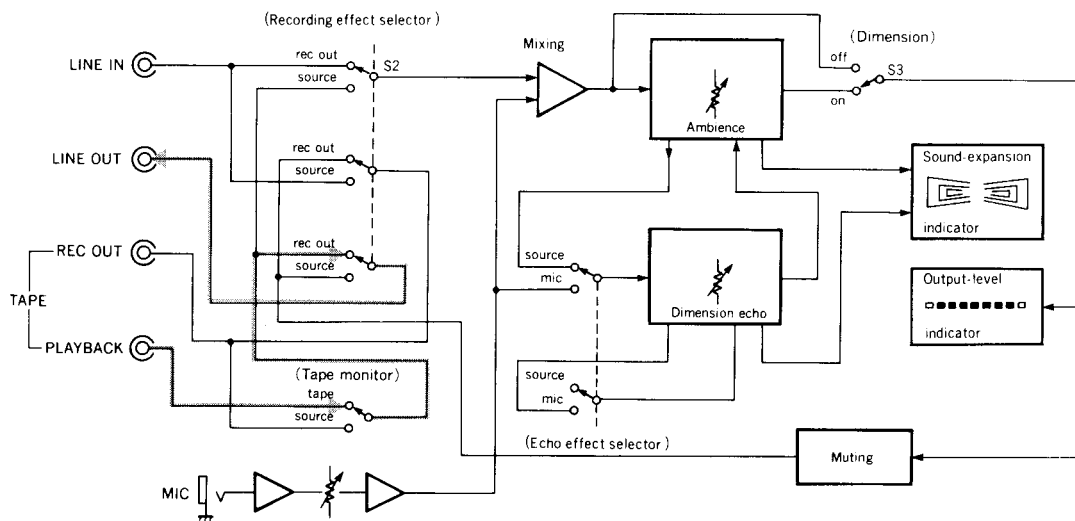
With recording effect selector at source and tape-monitor at tape, tape playback signal having dimension effect is obtained at "LINE OUT".



[Fig. 3]

4. Input signal at "tape (PLAYBACK)" Fig. 4

With recording effect selector at rec out and tape-monitor at tape, tape playback signal is obtained at "LINE OUT".

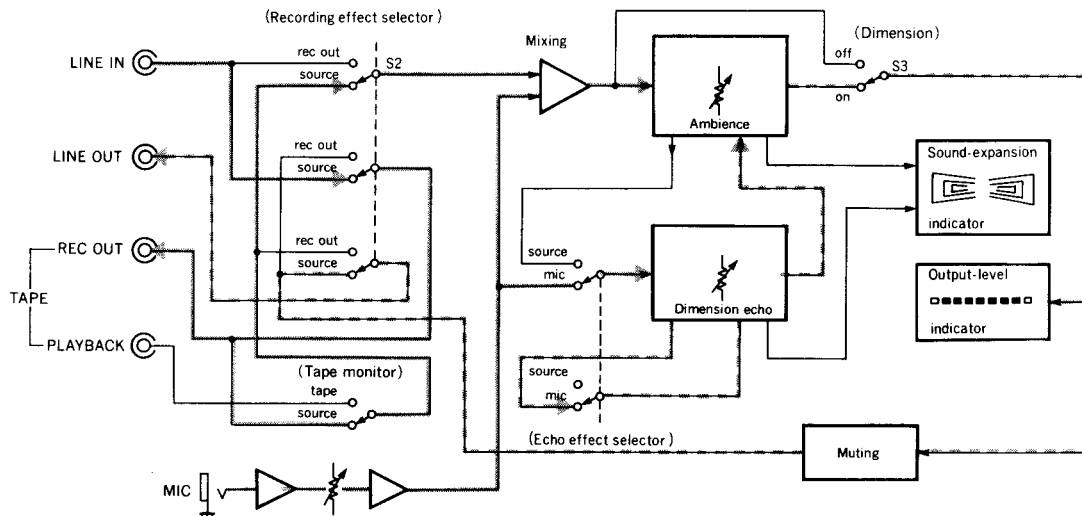


[Fig. 4]

5. Input signal at "LINE IN" and "MIC" Fig. 5

With recording effect selector and tape-monitor at source, "LINE IN" input signal and mic signal are mixed up at "LINE OUT" where signal having dimension effect is obtained. Also, signal of "LINE IN" is directly obtained at "REC OUT".

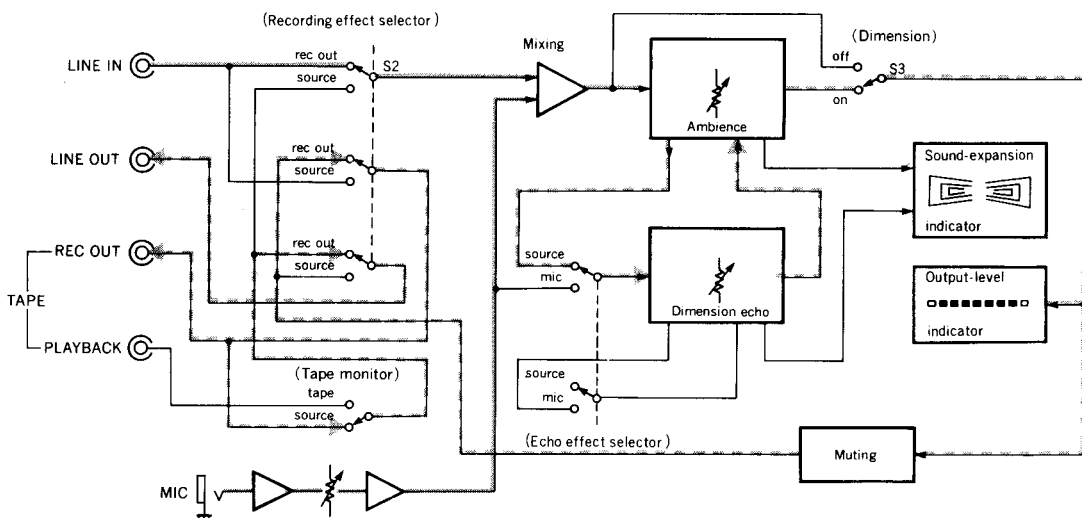
- * When echo effect selector is set at mic, only mic signal is given echo effect. (Repeated echo suited for vocal)
- * When echo effect selector is set at source, mixing signal is provided with echo effect. (In this case, single echo is given.)



[Fig. 5]

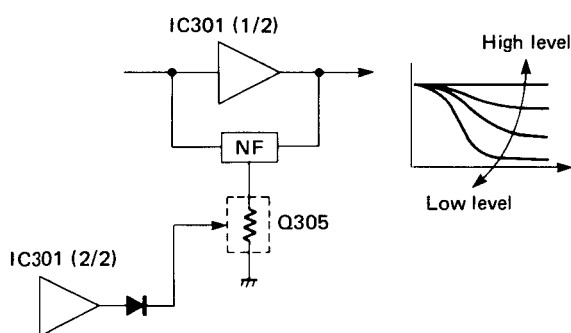
6. Input signal at "LINE IN" and "MIC" Fig. 6

With recording effect selector at rec out and tape-monitor at source, mixture of "LINE IN" input signal and mic signal is obtained at "LINE OUT" and "REC OUT".



[Fig. 6]

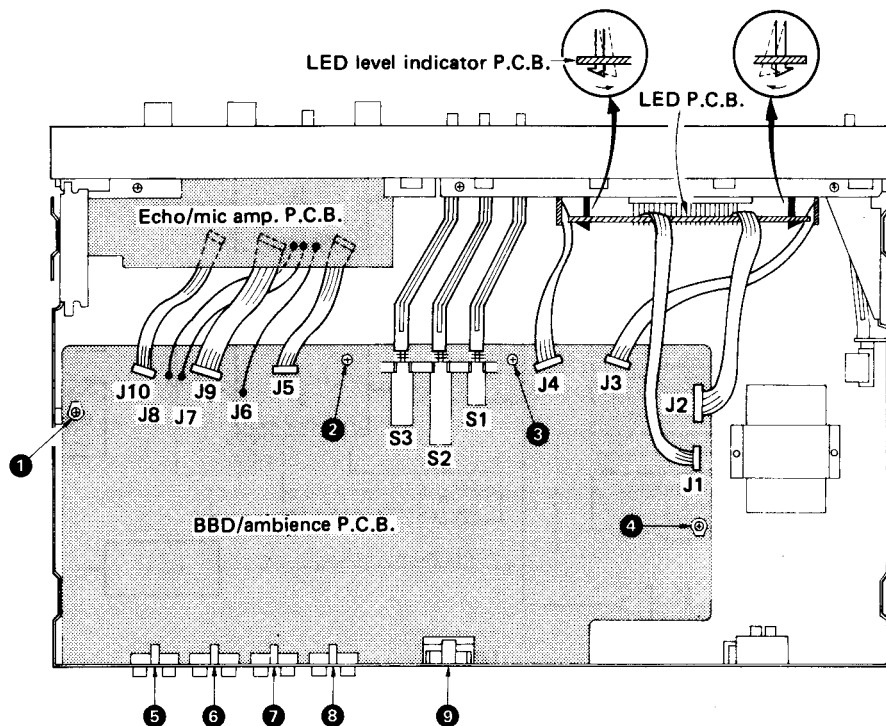
7. Noise reduction circuit



[Fig. 7]

- With the high-pass filter inserted in the feedback loop, the transfer characteristic is changed by Q305. Thus, the output of IC301 can serve as a variable high-cut filter.

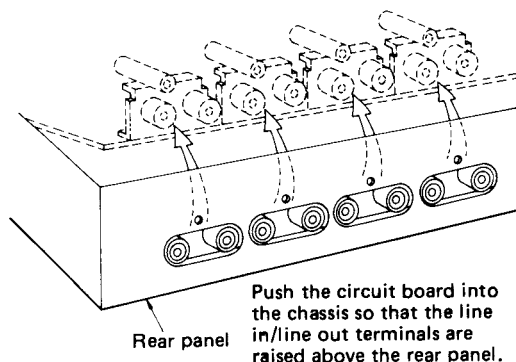
■ DISASSEMBLY INSTRUCTIONS



[Fig. 8]

• How to remove the BBD/ambience printed circuit board

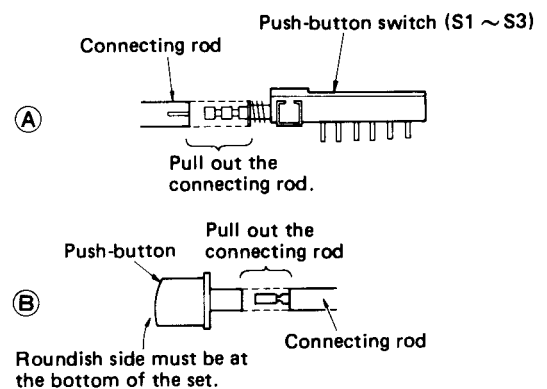
1. Remove the cabinet.
2. Remove the 9 screws (Fig. 8: ❶ ~ ❹) of the circuit board and line in/line out terminals.
3. Press the printed circuit board toward the front panel side so that the line in/line out terminals are raised above the rear panel as in Fig. 9.



[Fig. 9]

4. As in Fig. 10-(A), remove the connecting rod from the push-button switch. (Do not remove the button.)
5. Raise the printed circuit board from the chassis.

Note: For screws ❶ and ❹ of Fig. 8, screws (XTBS3+8BFZ1) or (XTB3+8BFZ) and toothed washers (XWC3B) must be used so that they come in complete contact with the chassis.



[Fig. 10]

• How to remove the LED level indicator printed circuit board

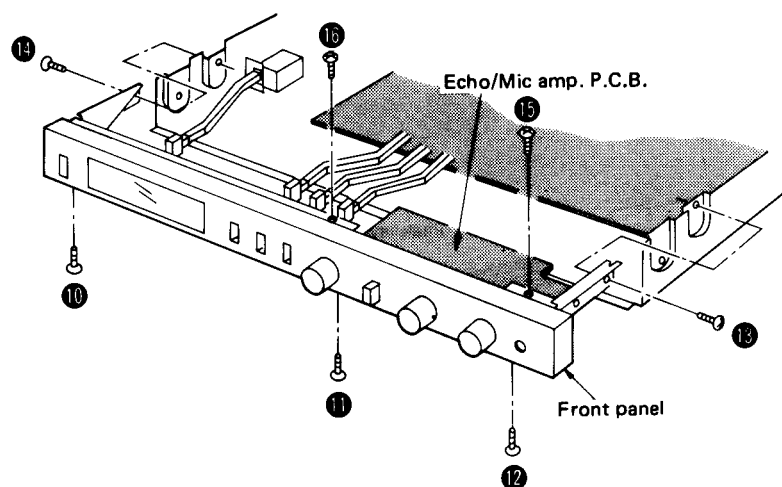
1. As in Fig. 8, the LED circuit board can be removed from the indicator case by pushing the 2 claws, which fasten the circuit board, in the direction of the arrow.

• How to remove the front panel

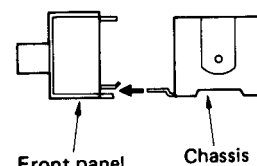
1. Disconnect the flat cables from the lead connectors (J1 ~ J5, J9, J10) of BBD/ambience printed circuit board. (Fig. 8)
2. Remove the 3 front panel setscrews (Fig. 11 : ⑩ ~ ⑫) at the bottom of the set.
3. Remove the 2 setscrews (Fig. 11 : ⑬, ⑭) on the right and left sides of the front panel.
4. Pull out the panel.

Notes: 1. Be careful of the leads J6, J7 and J8 (Fig. 8).

2. To mount the front panel, fit the righthand bottom into the chassis as in Fig. 12.



[Fig. 11]



[Fig. 12]

• How to remove the sound-expansion indicator

1. Remove the front panel.
2. Remove the indicator case from the front panel as shown in Fig. 13.
3. Remove the lamp circuit board. (Fig. 14)
4. Remove the reflection plate. (Fig. 15)
5. Remove the steel holder. (Fig. 17)
6. Remove the steel panel. (Fig. 17)

Notes: 1. Be careful of the reflection plate positions which are different on the right and left as shown in Fig. 16.

2. When inserting the steel plates, be careful of the positions as shown in Fig. 17.

• How to connect the flat cables

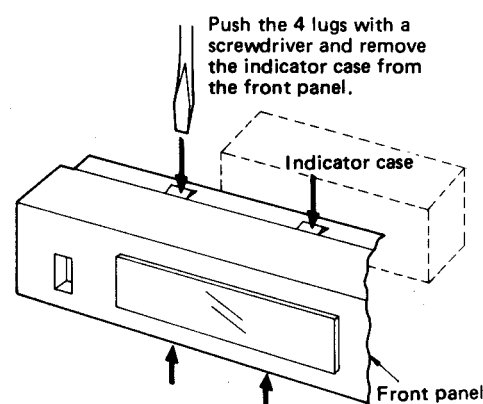
1. White letters are printed on one of the flat cables. So, match the cable with the connector No. 1 when connecting the cables. (Fig. 18)

• Position of the push-button switch

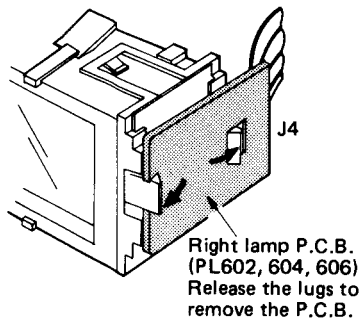
1. As in Fig. 10-(B), the roundish side of the switch must be at the bottom of the panel.

• How to remove the echo/mic amp P.C.B.

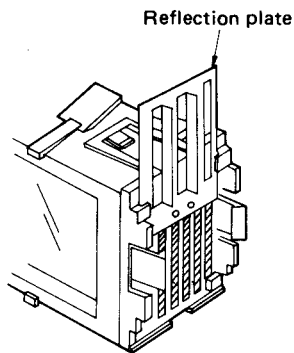
1. Remove the front panel.
2. Remove the screws (⑬, ⑭) of Fig. 11.
3. Remove the P.C.B. from the front, taking care not to scratch the knobs.



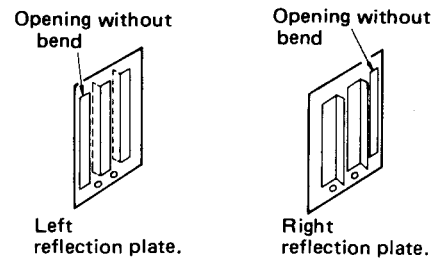
[Fig. 13]



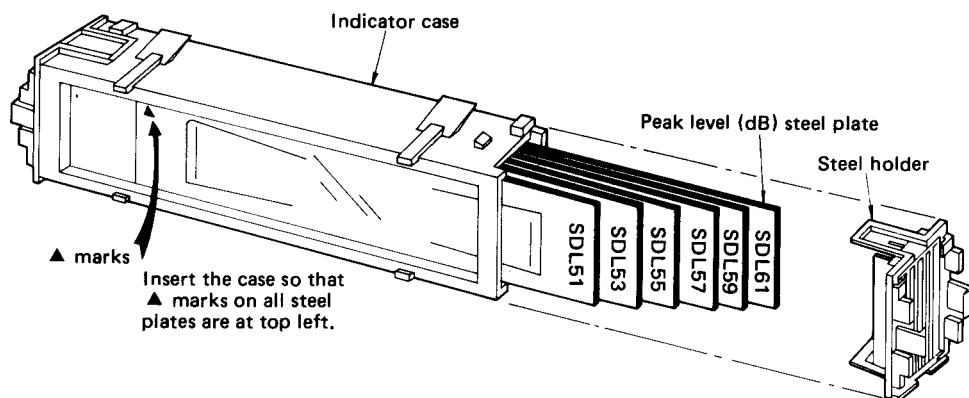
[Fig. 14]



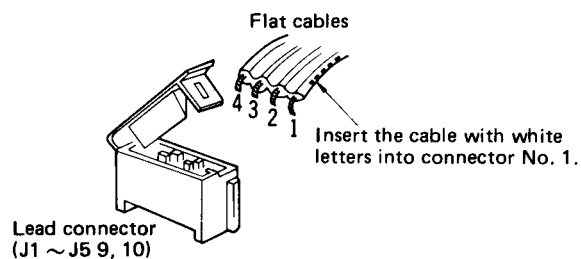
[Fig. 15]



[Fig. 16]



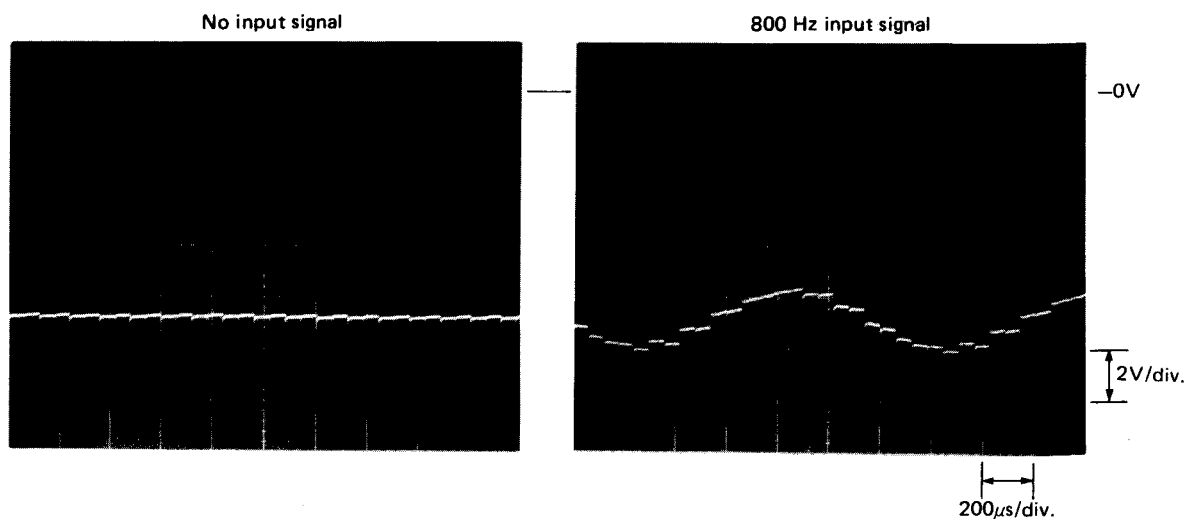
[Fig. 17]



[Fig. 18]

■ WAVEFORMS FROM EACH TERMINAL OF BBD IC

- Waveforms of IC303 (MN3007)
terminals ⑦ and ⑧ — (1)



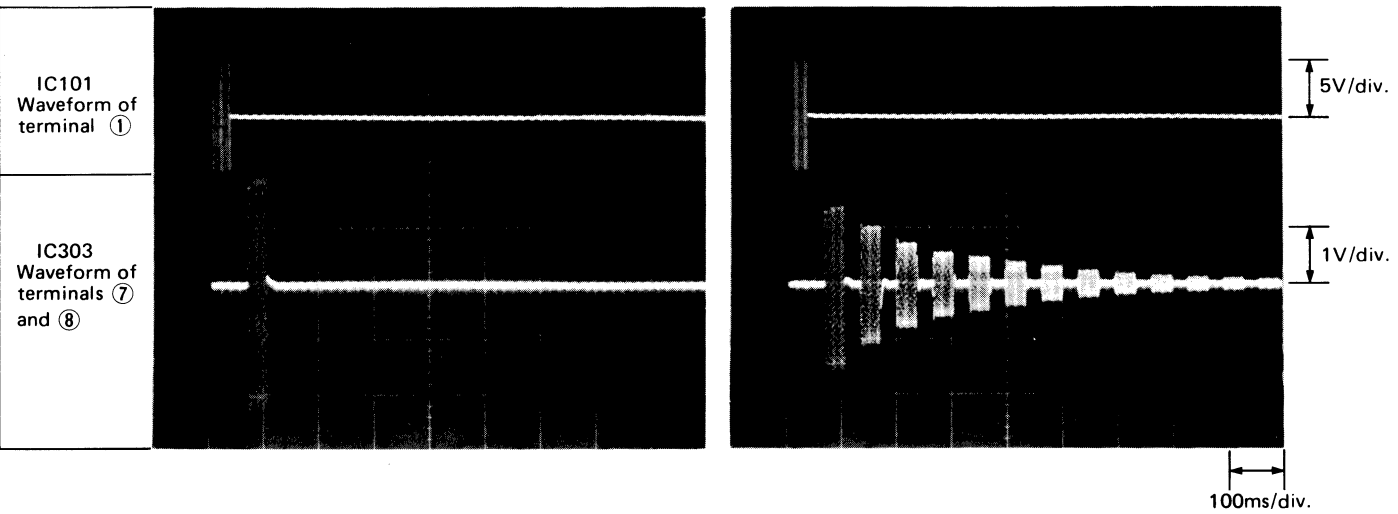
Waveforms of IC303 (MN3007) terminals ⑦ and ⑧ — (2)

Note: * Waveforms with echo effect selector at source and mic.

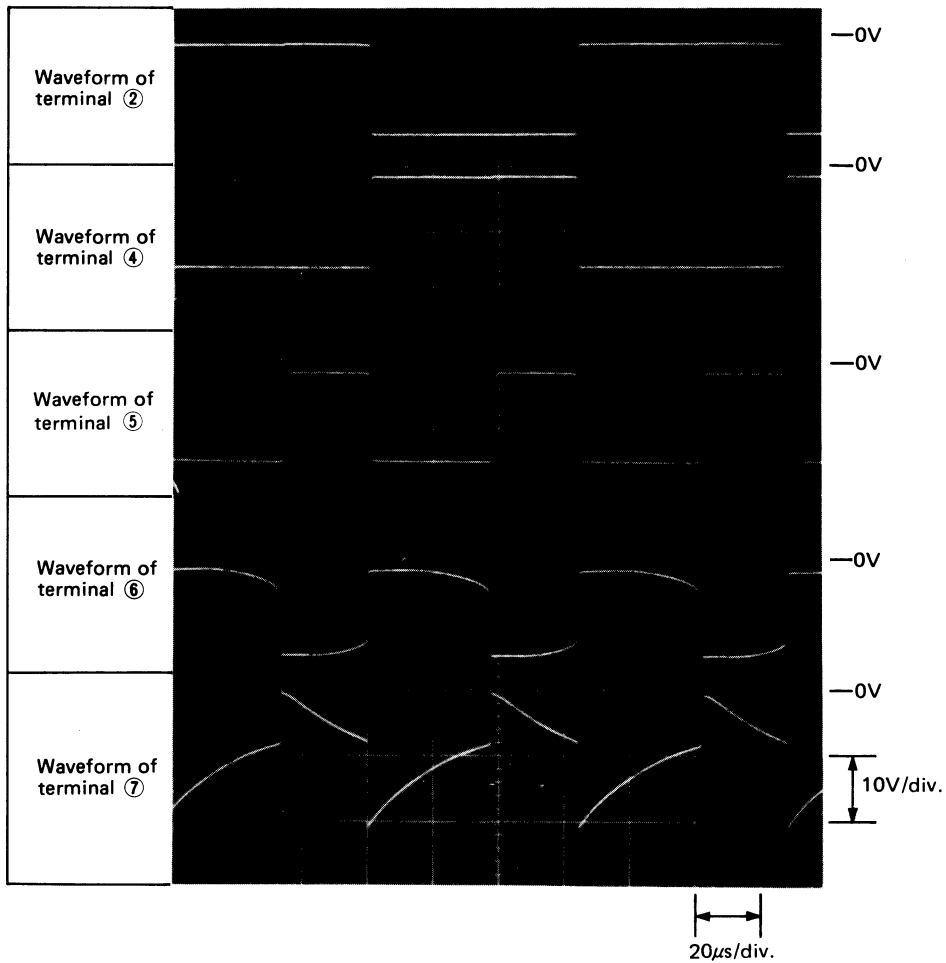
* Input signal — tone burst waves at 400 Hz from mic jack.

Echo effect selector at source.

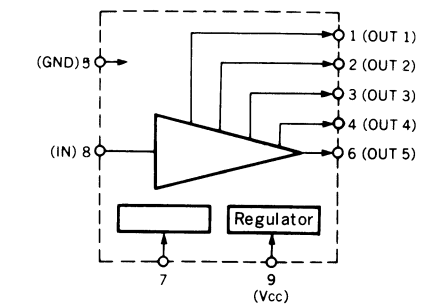
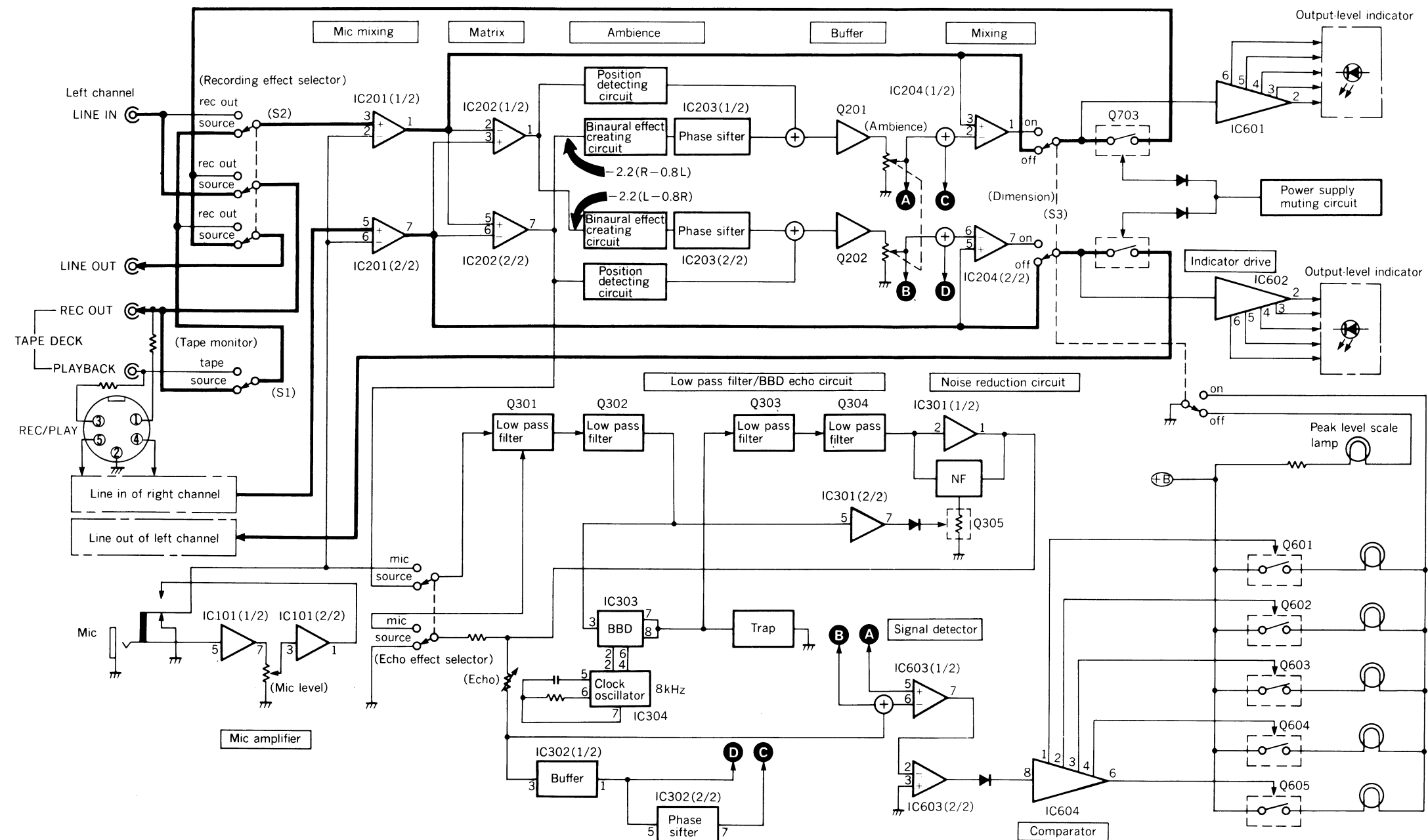
Echo effect select at mic.



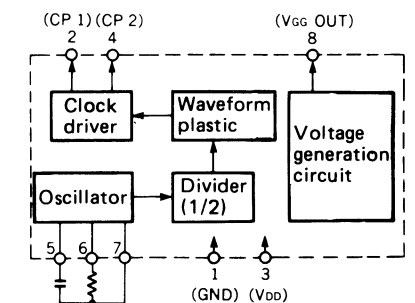
Waveforms from each terminals of IC304 (MN3101)



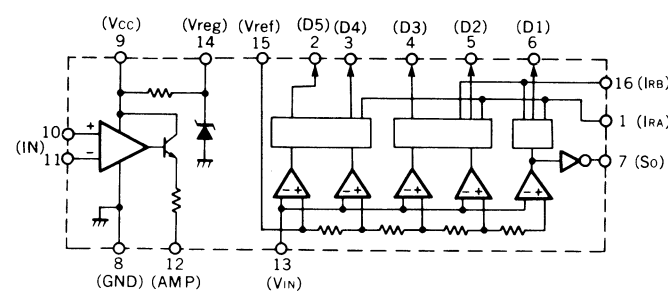
■ BLOCK DIAGRAM



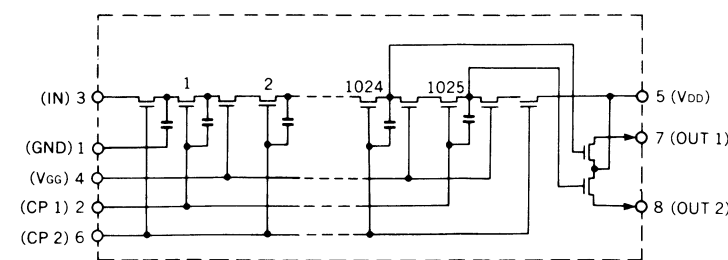
IC604 (AN6875)
Sound-expansion indicator comparator



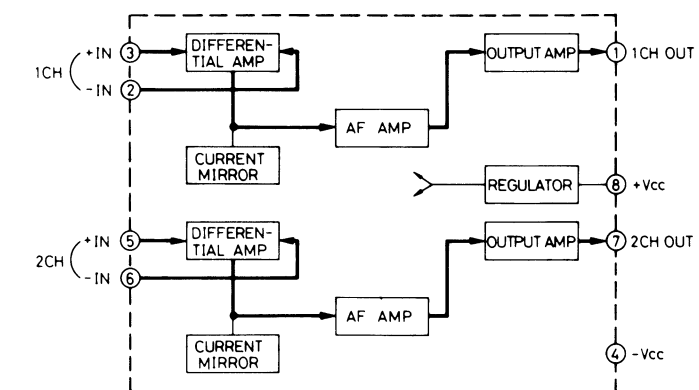
IC304 (MN3101)
BBD control



IC601, 602 (SVIIR2E01)
LED level indicator drive

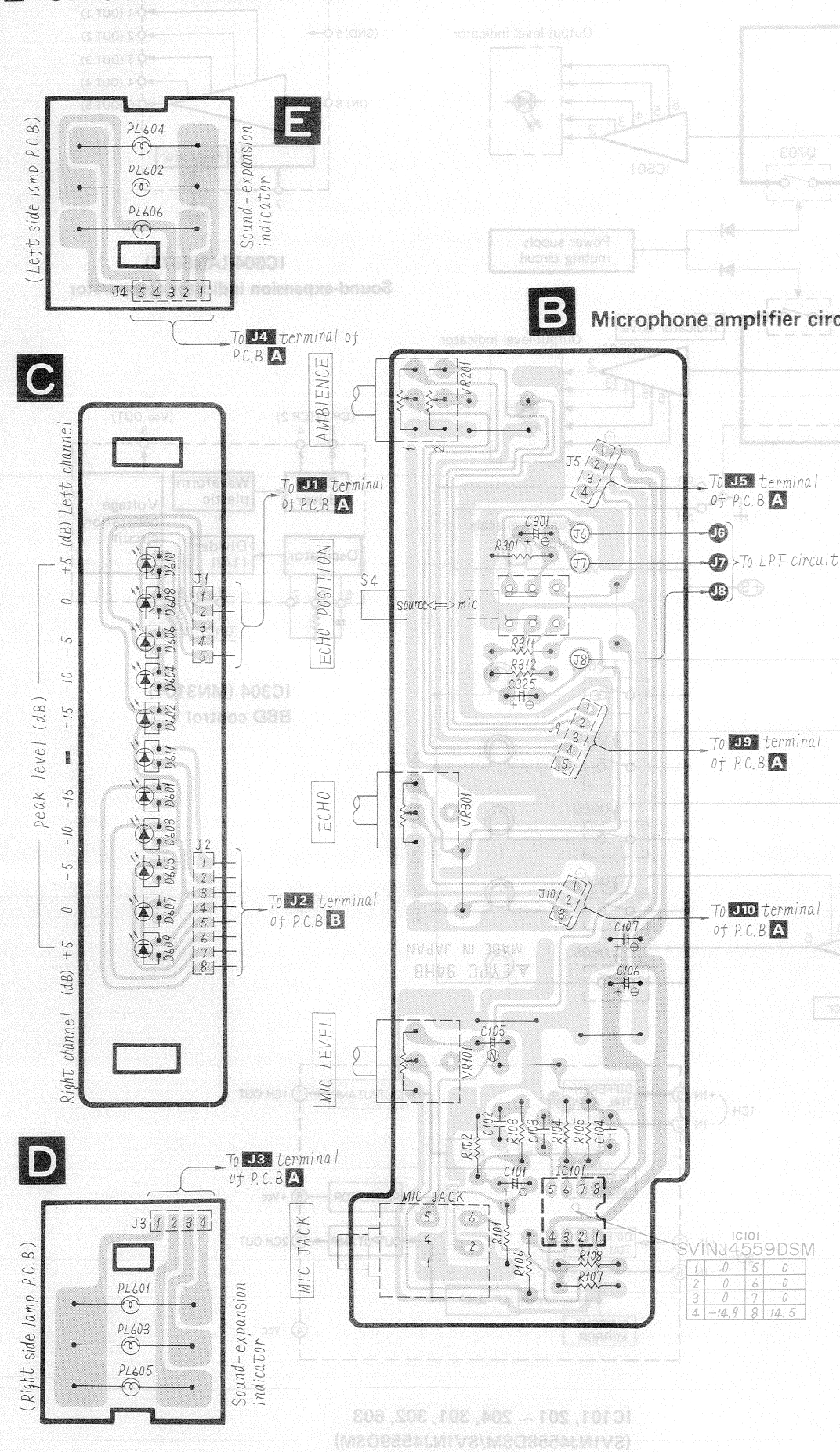


IC303 (MN3007)
BBD



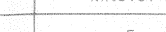
IC101, 201 ~ 204, 301, 302, 603
(SVINJ4558DSM/SVINJ4559DSM)
AF amplifier

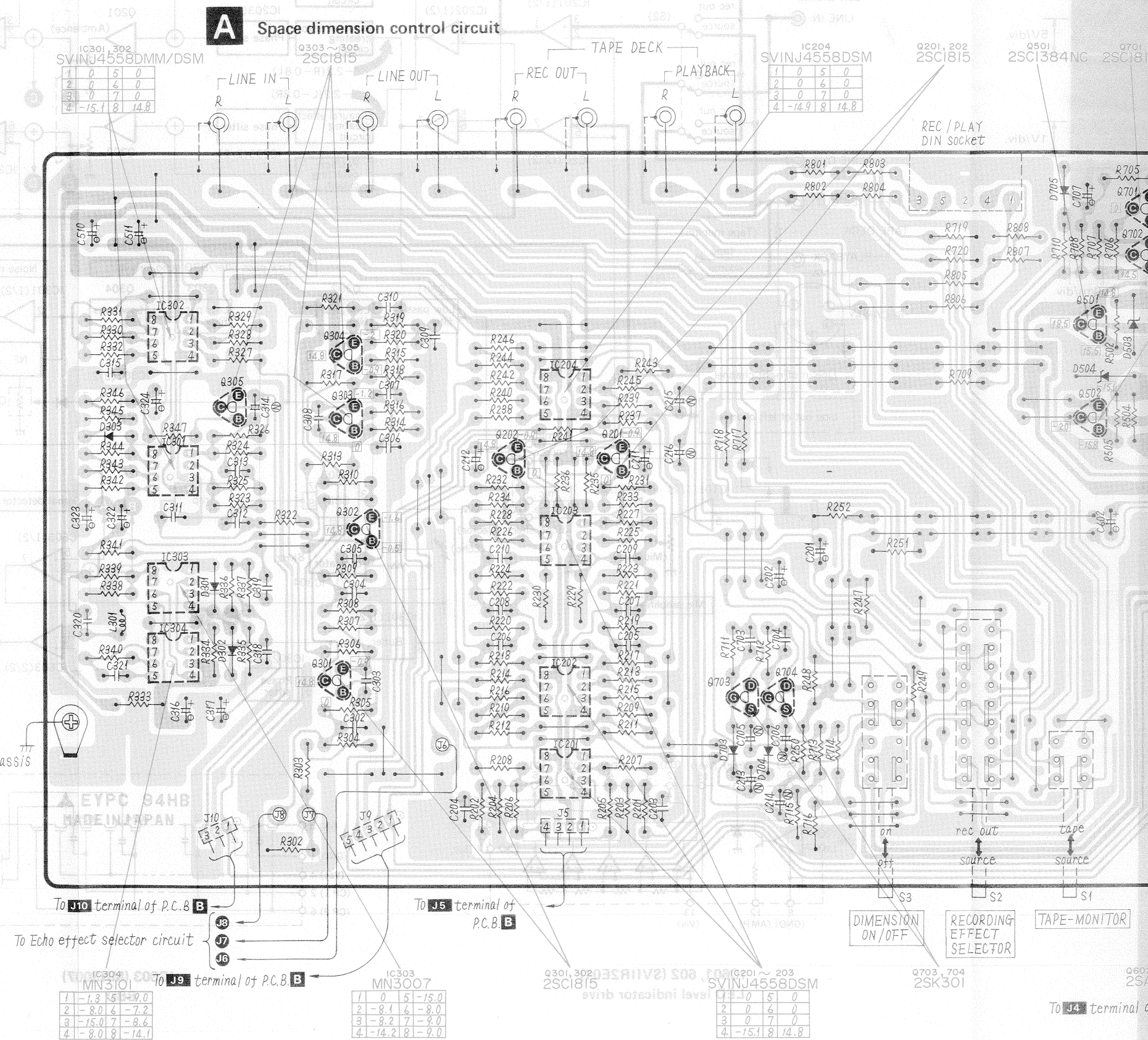
■ CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



Ground (Earth) lines

- Terminal guide of IC's, transistors and diodes

2SA683, 2SA684, 2SA1015, 2SC1815, 2SC1384 	2SK301  1. Drain 2. Gate 3. Source	SVINJ4558, SVINJ4559 	MN3007 MN3101 	SVINJ4558, SVINJ4559 
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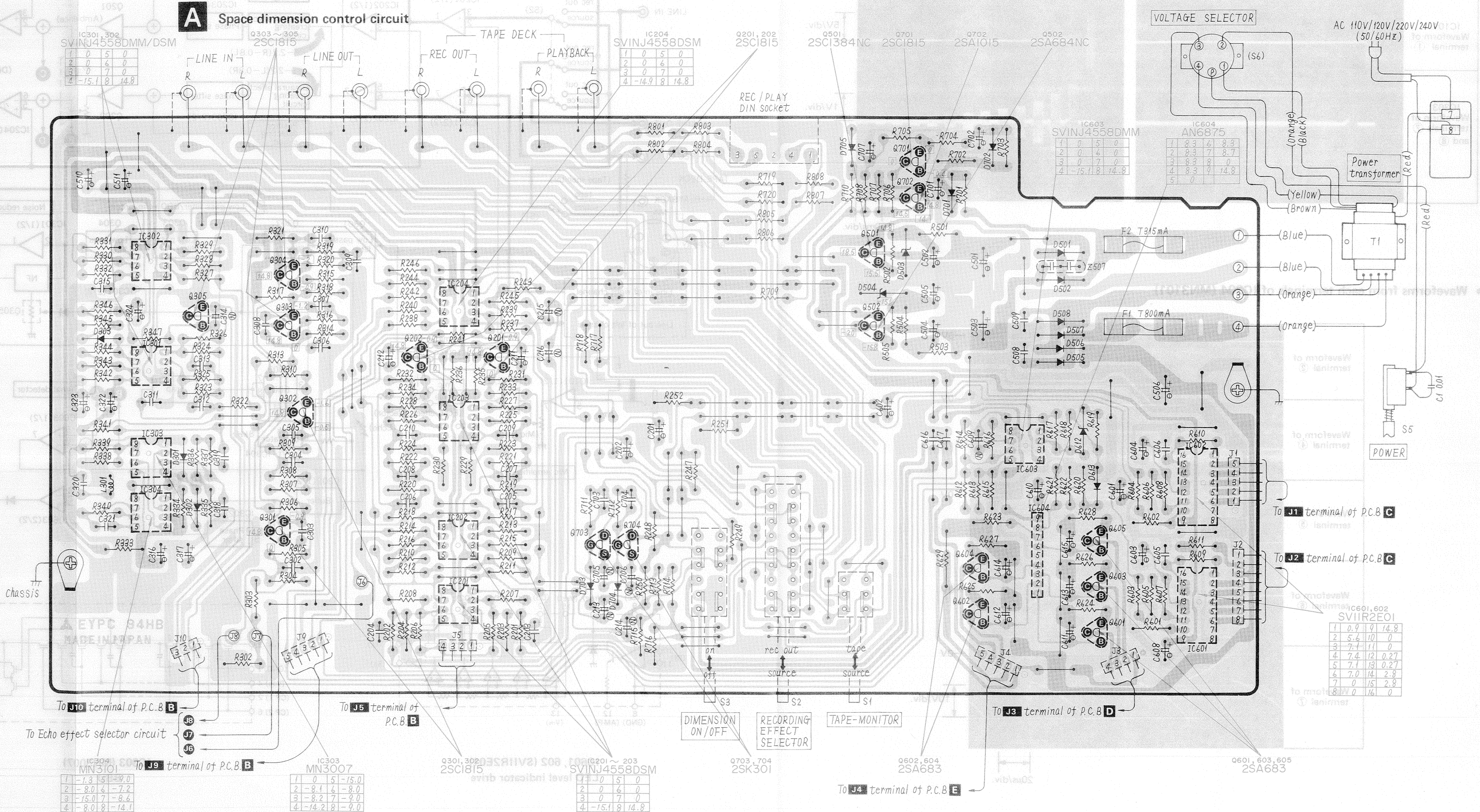


Ground (Earth) lines

• Terminal guide of IC's, transistors and diodes

2SA683, 2SA1015, 2SC1384	2SA684, 2SC1815, 2SC1384	2SK301	SVINJ4558, SVINJ4559	MN3007 MN3101	SVIIR2E01	AN6875	LN317GP, LN417YP
		1. Drain 2. Gate 3. Source					

A Space dimension control circuit

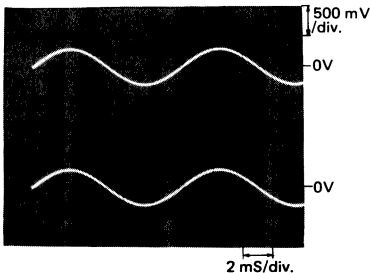
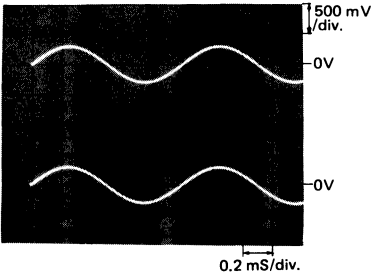
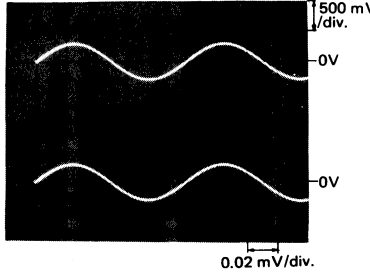
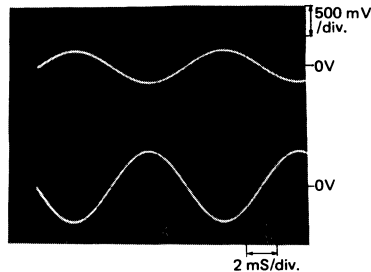
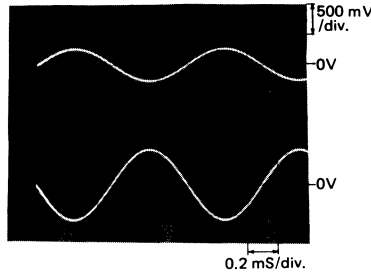
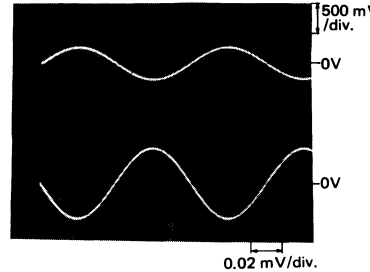
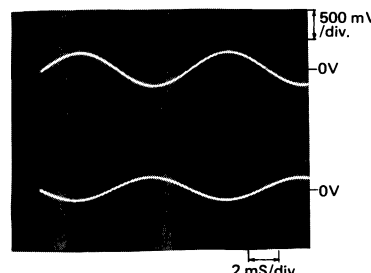
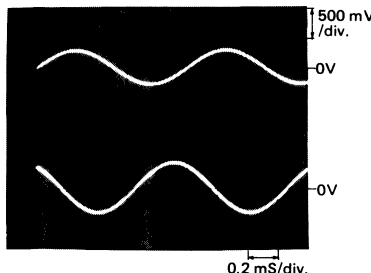
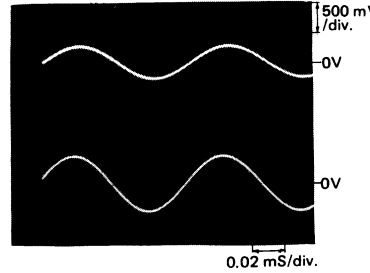
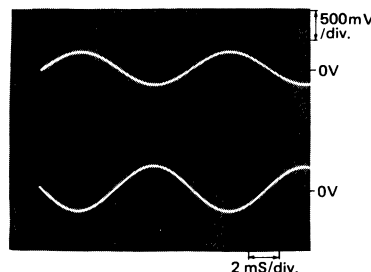
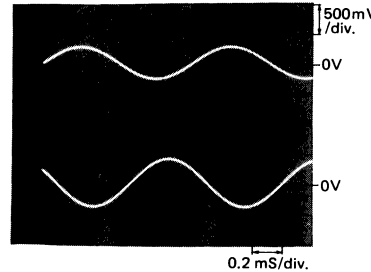
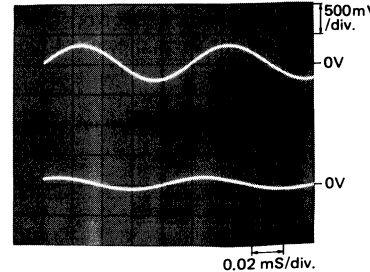


■ WAVEFORMS FROM POINTS ① ~ ⑧ IN THE SCHEMATIC DIAGRAM

● Waveforms from points ① ~ ⑤ in the schematic diagram

Notes

1. Shown below are the waveforms for points ① ~ ⑤ in the schematic diagram. The top photo is the input waveform, and the bottom one is for each point.
2. The input signal comes in 3 types – (1) 200 mV/100 Hz, (2) 200 mV/1 kHz, and (3) 200 mV/10 kHz – which are applied to LINE IN terminal (L channel only).
3. Settings
- * Microphone level control min.
- * Echo-adjustment control. min.
- * Ambience-adjustment control max.
- * Echo effect selector source
- * Dimension on/off off
- * Recording effect selector source
- * Tape monitor source

Point No.	(1) Input signal – 200mV/100Hz	(2) Input signal – 200mV/1kHz	(3) Input signal – 200mV/10kHz
①			
②			
③			
④			

Point No.	(1) Input signal — 200mV/100Hz	(2) Input signal — 200mV/1kHz	(3) Input signal — 200mV/10kHz
5			

• Waveforms from points 6 ~ 8 in the schematic diagram

Notes)

- The measuring conditions for points 6 ~ 8 are different from those for points 1 ~ 5 with respect to the following.
* Ambience-adjustment control center ("5")
- The waveform for points 6 ~ 8 (bottom photo) is measured on DC.
- The input signal of 200 mV/100 Hz applied to the LINE IN terminal (L channel only), and the input waveform is measured on AC.

Part No.	6	7	8

• Notes of schematic diagram

Notes

- S1** : Tape-monitor selector switch in "source" position.
source ↔ tape
- S2** : Recording effect selector switch in "source" position.
source ↔ rec out
- S3** : Dimension on/off switch in "off" position.
on ↔ off
- S4** : Echo effect selector switch in "source" position.
source ↔ mic
- S5** : Power switch in "on" position.
- S6** : Voltage selector switch in "240V" position.
110V ↔ 120V ↔ 220V ↔ 240V
- The part No. of transistors, IC and diodes mentioned in the schematic diagram stand for production part No. Regarding the part No. without ★ mark, the production part No. are different from the replacement part No. Therefore, when placing an order for replacement parts, please use the part No. in the replacement parts list.
- Indicated voltage values are the standard values for the DC electronic circuit tester (high impedance) with the chassis taken values, depending on the internal impedance of the DC circuit tester.

DC voltage value measured under the conditions 1 ~ 5 during no signal mode.

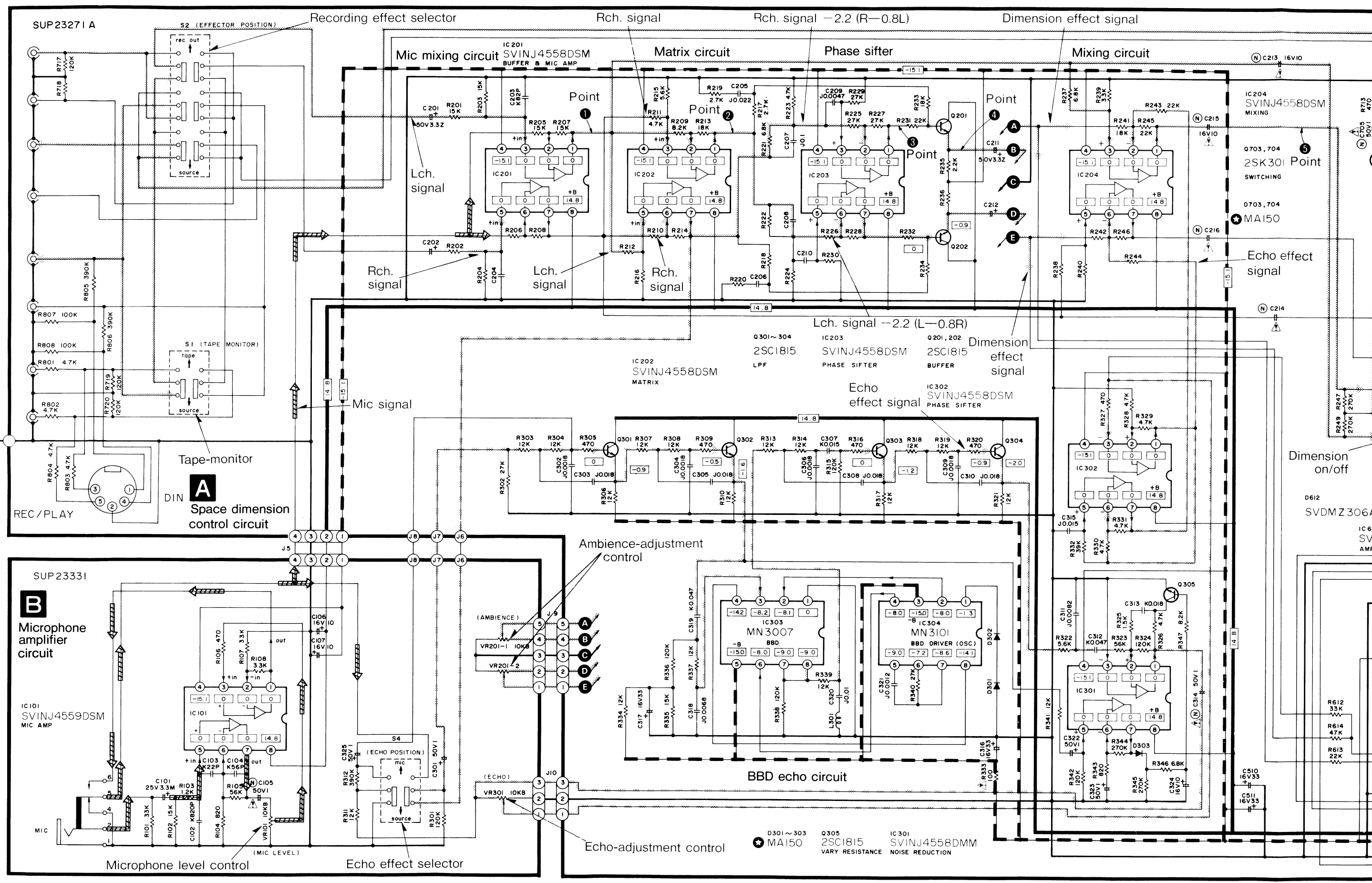
() : Voltage value when lamp or LED is lighted at 1V (1 kHz) input.
- Signals lines of left channel.

Signal lines of echo effect signal.

Signal lines of mic.

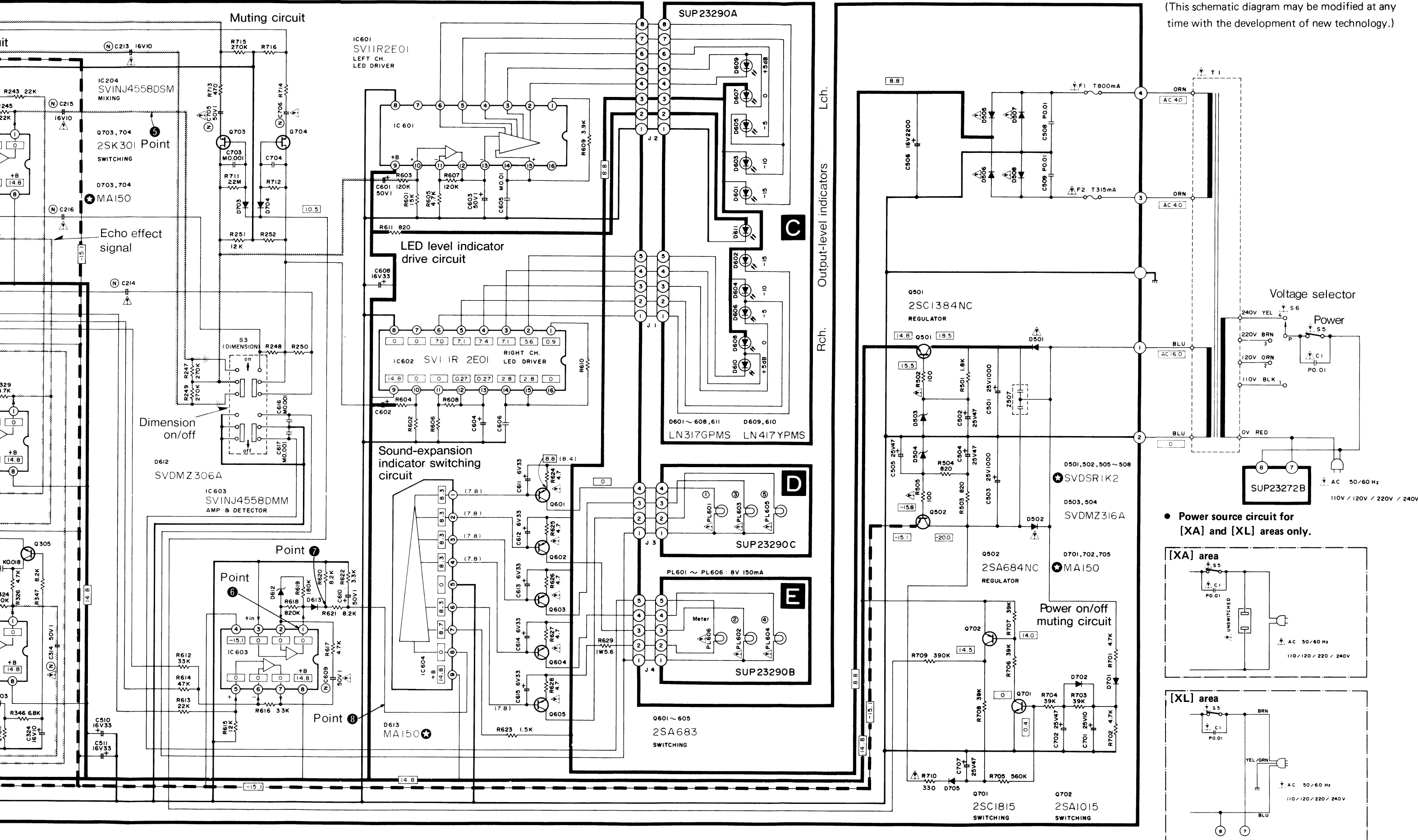
Positive (+B) voltage lines.

Negative (−B) voltage lines.
- Important safety notice:
Components identified by ▲ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

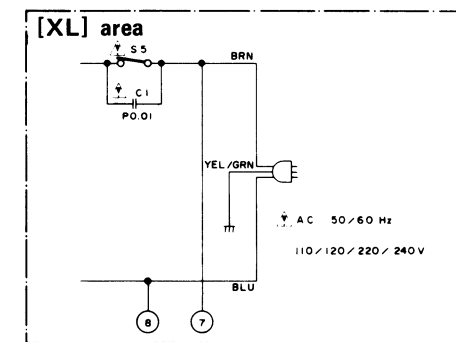
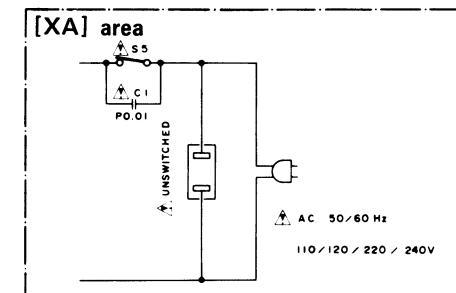


■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)



● Power source circuit for [XA] and [XL] areas only.



REPLACEMENT PARTS LIST

- Notes:**
- Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
 - Important safety notice:
Components identified by  mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
 - The "S" mark is service standard parts and may differ from production parts.
 - —marked parts are used for black only, while —marked parts are for silver type only.
 - Parts other than — and —marked are used for both black and silver types.
 - Bracketed indications in Ref. No. columns specify the area.

Parts without these indications can be used for all areas.

Areas

- * [E] is available in Switzerland and Scandinavia.
- * [EG] is available in F.R. Germany.
- * [EK] is available in United Kingdom.
- * [Ei] is available in Italy.
- * [EH] is available in Holland.
- * [EB] is available in Belgium.
- * [EF] is available in France.
- * [XA] is available in South East Asia, Oceania, Africa, Middle Near East and Central South America.
- * [XL] is available in Australia.

Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUITS		
IC101 IC201 ~ 204, 302 IC301, 603 IC303 IC304 IC601, 602 IC604	SVINJ4559DSM SVINJ4558DSM SVINJ4558DMM MN3007 MN3101 SVIIR2E01 AN6875	IC, Mic Amplifier IC, Buffer, Mixing, Phase Shifter & Matrix IC, Noise Reduction & Detector IC, BBD IC, BBD IC, LED Drive IC, Comparator
TRANSISTORS		
Q201, 202, 301 ~ 305, 701 Q501	2SC1815—Y S 2SC1384AR	Transistor, Buffer, LPF & Switching (Product Part No. 2SC1815—Y or GR) Transistor, Regulator (Product Part No. 2SC1384—AR or AQ)
Q502	2SA684—RNC	Transistor, Regulator (Product Part No. 2SA684—RNC or QNC)
Q601 ~ 605	S 2SA683	Transistor, Switching (Product Part No. 2SA683—Q, R or S)
Q702	2SA1015—Y	Transistor, Switching (Product Part No. 2SA1015—G, R or Y)
Q703, 704	2SK301—S	Transistor, Switching [FET] (Product Part No. 2SK301—S or R)
DIODES		
D301 ~ 303, 613 701, 702 ~ 705 D501, 502 505 ~ 508 D503, 504 D601 ~ 608, 611 D609, 610 D612	S MA162A S  SVDSR1K2 S VDMZ316A LN317GP LN417YP S VDMZ306A	Diode, Bias Supply & Detection (Product Part No. MA150) Rectifier Diode, 16V Zener Light Emitting Diode, Green Light Emitting Diode, Yellow Diode, 6V Zener
COIL and TRANSFORMERS		
L301 T1	 SLQX393—1Z  SLT5J167—W	Coil, Choke Transformer, Power Source
VARIABLE RESISTORS		
VR101, 301 VR201	EVHNA542B14 EWHK3A054B14	Mic Level & Echo Control, 10kΩ Ambience Control, 10kΩ
COMPONENT COMBINATION		
Z507	SXRF5203ZSM	Component Combination, 0.01μF x 2
FUSES		
F1 F2	 XBA2C08TR0  XBA2C03TR0	Fuse, 800mA, 250V Fuse, 300mA, 250V
SWITCHES		
S1 ~ 3 S4 S5 S6	SSH3027 SSH165  ESB90619S  ESE3787	Switch, Tape Effect, Dimension Switch, Echo Switch, Power Switch, Voltage Selector
LAMP		
PL601 ~ 606	 XAMR94Q17	Lamp, 8V, 150mA
RESISTORS		
R101 R102	S ERD25TJ333 S ERD25TJ153	Carbon, 1/4W, 33kΩ, ± 5% Carbon, 1/4W, 15kΩ, ± 5%

Ref. No.	Part No.	Part Name & Description
R103 R104 R105 R106 R107 R108 R201, 202 R203, 204	S ERD25FJ122 S ERD25FJ821 S ERD25TJ563 S ERD25FJ471 S ERD25FJ332 S ERD25FJ103 S ERD25TJ153 S ERD25TJ153	Carbon, 1/4W, 1.2kΩ, ± 5% Carbon, 1/4W, 820Ω, ± 5% Carbon, 1/4W, 56kΩ, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 3.3kΩ, ± 5% Carbon, 1/4W, 10kΩ, ± 5% Carbon, 1/4W, 15kΩ, ± 5% Carbon, 1/4W, 15kΩ, ± 5%
R205, 206 R207, 208 R209, 210 R211, 212 R213, 214 R215, 216 R217, 218 R219, 220 R221, 222 R223, 224	S ERD25TJ153 S ERD25TJ153 S ERD25FJ822 S ERD25FJ472 S ERD25TJ183 S ERD25FJ562 S ERD25FJ272 S ERD25FJ272 S ERD25FJ682 S ERD25FJ472	Carbon, 1/4W, 15kΩ, ± 5% Carbon, 1/4W, 15kΩ, ± 5% Carbon, 1/4W, 8.2kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 18kΩ, ± 5% Carbon, 1/4W, 5.6kΩ, ± 5% Carbon, 1/4W, 2.7kΩ, ± 5% Carbon, 1/4W, 2.7kΩ, ± 5% Carbon, 1/4W, 6.8kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5%
R225, 226 R227, 228 R229, 230 R231, 232 R233, 234 R235, 236 R237, 238 R239, 240 R241, 242 R243, 244	S ERD25TJ273 S ERD25TJ273 S ERD25TJ273 S ERD25TJ223 S ERD25TJ183 S ERD25FJ222 S ERD25FJ682 S ERD25FJ332 S ERD25TJ183 S ERD25TJ223	Carbon, 1/4W, 27kΩ, ± 5% Carbon, 1/4W, 27kΩ, ± 5% Carbon, 1/4W, 27kΩ, ± 5% Carbon, 1/4W, 22kΩ, ± 5% Carbon, 1/4W, 18kΩ, ± 5% Carbon, 1/4W, 2.2kΩ, ± 5% Carbon, 1/4W, 6.8kΩ, ± 5% Carbon, 1/4W, 3.3kΩ, ± 5% Carbon, 1/4W, 18kΩ, ± 5% Carbon, 1/4W, 22kΩ, ± 5%
R245, 246 R247, 248 R249, 250 R251, 252 R301 R302 R303, 304 R305 R306, 307 R308	S ERD25TJ223 S ERD25TJ274 S ERD25TJ274 S ERD25TJ123 S ERD25TJ124 S ERD25TJ273 S ERD25TJ123 S ERD25FJ471 S ERD25FJ471 S ERD25TJ123 S ERD25TJ123	Carbon, 1/4W, 22kΩ, ± 5% Carbon, 1/4W, 270kΩ, ± 5% Carbon, 1/4W, 270kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 27kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5%
R309 R310, 311 R312 R313, 314 R315 R316 R317, 318 R319 R320 R321	S ERD25FJ471 S ERD25TJ123 S ERD25TJ394 S ERD25TJ123 S ERD25TJ124 S ERD25FJ471 S ERD25TJ123 S ERD25FJ471 S ERD25FJ471 S ERD25TJ123	Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 390kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 12kΩ, ± 5%
R322 R323 R324 R325 R326 R327 R328, 329 R330, 331 R332 R333 R334 R335 R336 R337	S ERD25FJ562 S ERD25TJ563 S ERD25TJ124 S ERD25FJ152 S ERD25FJ472 S ERD25FJ471 S ERD25FJ472 S ERD25FJ472 S ERD25TJ393 S  ERD25FJ101 S ERD25TJ123 S ERD25TJ153 S ERD25TJ124 S ERD25TJ123	Carbon, 1/4W, 5.6kΩ, ± 5% Carbon, 1/4W, 56kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 1.5kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 39kΩ, ± 5% Carbon, 1/4W, 100Ω, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 15kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5%
R338 R339	S ERD25TJ124 S ERD25TJ123	Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5%

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Ref. No.	Part No.	Part Name & Description
R340 R341 R342 R343 R344, 345 R346 R347 R501	S ERD25TJ273 S ERD25TJ123 S ERD25TJ124 S ERD25FJ821 S ERD25TJ274 S ERD25FJ682 S ERD25FJ822 S ERD25FJ182	Carbon, 1/4W, 27kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 820Ω, ± 5% Carbon, 1/4W, 270kΩ, ± 5% Carbon, 1/4W, 6.8kΩ, ± 5% Carbon, 1/4W, 8.2kΩ, ± 5% Carbon, 1/4W, 1.8kΩ, ± 5%
R502 R503, 504 R505 R601, 602 R603, 604 R605, 606 R607, 608 R609, 610 R611 R612	S  ERD25FJ101 S ERD25FJ821 S  ERD25FJ101 S ERD25TJ153 S ERD25TJ124 S ERD25FJ472 S ERD25TJ124 S ERD25FJ392 S ERD25FJ821 S ERD25TJ333	Carbon, 1/4W, 100Ω, ± 5% Carbon, 1/4W, 820Ω, ± 5% Carbon, 1/4W, 100Ω, ± 5% Carbon, 1/4W, 15kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 3.9kΩ, ± 5% Carbon, 1/4W, 820Ω, ± 5% Carbon, 1/4W, 33kΩ, ± 5%
R613 R614 R615 R616 R617 R618 R619 R620, 621 R622 R623	S ERD25TJ223 S ERD25TJ473 S ERD25TJ123 S ERD25TJ333 S ERD25FJ472 S ERD25TJ824 S ERD25TJ184 S ERD25FJ822 S ERD25FJ332 S ERD25FJ152	Carbon, 1/4W, 22kΩ, ± 5% Carbon, 1/4W, 47kΩ, ± 5% Carbon, 1/4W, 12kΩ, ± 5% Carbon, 1/4W, 33kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 820kΩ, ± 5% Carbon, 1/4W, 180kΩ, ± 5% Carbon, 1/4W, 8.2kΩ, ± 5% Carbon, 1/4W, 3.3kΩ, ± 5% Carbon, 1/4W, 1.5kΩ, ± 5%
R624, 625 R626, 627 R628 R629 R701, 702 R703, 704 R705 R706, 707 R708 R709 R710	S  ERD2FCJ4R7 S  ERD2FCJ4R7 S ERD2FCJ5R6 S ERD25FJ472 S ERD25TJ393 S ERD25TJ564 S ERD25TJ393 S ERD25TJ393 S ERD25TJ394 S  ERD25FJ331	Carbon, 1/4W, 4.7Ω, ± 5% Carbon, 1/4W, 4.7Ω, ± 5% Carbon, 1/4W, 4.7Ω, ± 5% Carbon, 1/4W, 5.6Ω, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 39kΩ, ± 5% Carbon, 1/4W, 560kΩ, ± 5% Carbon, 1/4W, 39kΩ, ± 5% Carbon, 1/4W, 39kΩ, ± 5% Carbon, 1/4W, 390kΩ, ± 5% Carbon, 1/4W, 330Ω, ± 5%
R711, 712 R713, 714 R715, 716 R717, 718 R719, 720 R801, 802 R803, 804 R805, 806 R807, 808	S ERC14GJ226 S ERD25FJ471 S ERD25TJ274 S ERD25TJ124 S ERD25TJ124 S ERD25FJ472 S ERD25FJ472 S ERD25TJ394 S ERD25TJ104	Solid, 1/4W, 22MΩ, ± 5% Carbon, 1/4W, 470Ω, ± 5% Carbon, 1/4W, 270kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 120kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 4.7kΩ, ± 5% Carbon, 1/4W, 390kΩ, ± 5% Carbon, 1/4W, 100kΩ, ± 5%
CAPACITORS		
C1 C101 C102 C103 C104 C105 C106, 107 C201, 202 C203, 204 C205, 206	 ECKDKC103PF S ECEA50M3R3R S ECKD1H821KB S ECCD1H220KC S ECCD1H560K  ECEA1HN010S S ECEA1HS100 S ECEA50Z3R3 S ECCD1H820K S ECQM1H223JZ	Ceramic, 125VAC, 0.01μF, ± 100% Electrolytic, 50V, 3.3μF Ceramic, 50V, 820pF, ± 10% Ceramic, 50V, 22pF, ± 10% Ceramic, 50V, 56pF, ± 10% Non-Polar Electrolytic, 50V, 1μF Electrolytic, 50V, 10μF Electrolytic, 50V, 3.3μF Ceramic, 50V, 82pF, ± 10% Polyester, 50V, 0.022μF, ± 5%
C207, 208 C209, 210 C211, 212 C213, 214 C215, 216 C301 C302 C303 C304 C305	S ECQM1H104JZ S ECQM1H472JZ S ECEA50Z3R3  ECEA1CN100S  ECEA1CN100S S ECEA50Z1 S ECQM1H182JZ S ECQM1H183JZ S ECQM1H182JZ S ECQM1H183JZ	Polyester, 50V, 0.1μF, ± 5% Polyester, 50V, 0.0047μF, ± 5% Electrolytic, 50V, 3.3μF Non-Polar Electrolytic, 50V, 10μF Non-Polar Electrolytic, 50V, 10μF Electrolytic, 50V, 1μF Polyester, 50V, 0.0018μF, ± 5% Polyester, 50V, 0.018μF, ± 5% Polyester, 50V, 0.0018μF, ± 5% Polyester, 50V, 0.018μF, ± 5%
C306 C307 C308 C309 C310 C311 C312 C313 C314 C315	S ECQM1H182JZ S ECQM1H153JZ S ECQM1H183JZ S ECQM1H182JZ S ECQM1H183JZ S ECQM1H822JZ S ECQM1H473JZ S ECQM1H183JZ  ECEA1HN010S S ECQM1H153JZ	Polyester, 50V, 0.0018μF, ± 5% Polyester, 50V, 0.015μF, ± 5% Polyester, 50V, 0.018μF, ± 5% Polyester, 50V, 0.0018μF, ± 5% Polyester, 50V, 0.018μF, ± 5% Polyester, 50V, 0.0082μF, ± 5% Polyester, 50V, 0.047μF, ± 5% Polyester, 50V, 0.018μF, ± 5% Non-Polar Electrolytic, 50V, 1μF Polyester, 50V, 0.015μF, ± 5%
C316, 317 C318 C319	S ECEA1CS330 S ECQM1H682JZ S ECQM1H473JZ	Electrolytic, 16V, 33μF Polyester, 50V, 0.0068μF, ± 5% Polyester, 50V, 0.047μF, ± 5%

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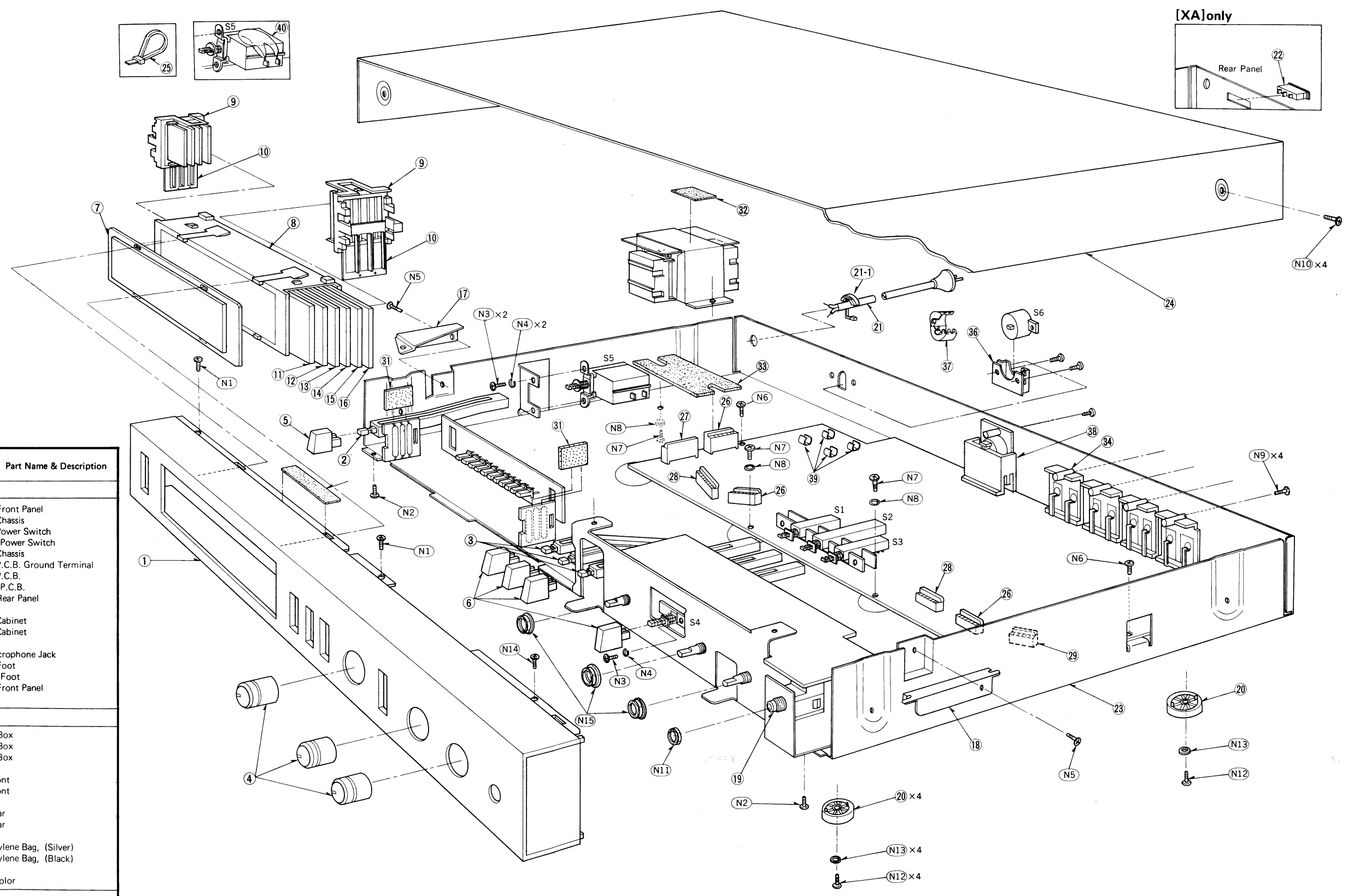
Ref. No.	Part No.	Part Name & Description
C320 C321 C322, 323 C324 C325 C501 C502	S ECQM1H103JZ S ECQM1H122JZ S ECEA50Z1 S ECEA1HS100 S ECEA50Z1 S ECEA1VS102 S ECEA1ES470	Polyester, 50V, 0.01μF, ± 5% Polyester, 50V, 0.0012μF, ± 5% Electrolytic, 50V, 1μF Electrolytic, 50V, 10μF Electrolytic, 50V, 1μF Electrolytic, 35V, 1000μF Electrolytic, 25V, 47μF
C503 C504, 505 C506 C508, 509 C510, 511 C601, 602 C603, 604 C605, 606 C608 C609	S ECEA1VS102 S ECEA1ES470 S ECEA1CS222 S ECKD1H103ZF S ECEA1CS330 S ECEA50Z1 S ECEA50Z1 S ECKD1H103ZF S ECEA1CS330  ECEA1HN010S	Electrolytic, 35V, 1000μF Electrolytic, 25V, 47μF Electrolytic, 16V, 2200μF Ceramic, 50V, 0.01μF, ± 80% Electrolytic, 16V, 33μF Electrolytic, 50V, 1μF Electrolytic, 50V, 1μF Ceramic, 50V, 0.01μF, ± 80% Electrolytic, 16V, 33μF Non-Polar Electrolytic, 50V, 1μF
C610 C611, 612 C613, 614 C615 C616, 617 C701 C702 C703, 704 C705, 706 C707	S ECEA50Z1 S ECEA1CS330 S ECEA1CS330 S ECEA1CS330 S ECKD1H102ZF S ECEA1HS100 S ECEA1ES470 S ECKD1H102ZF  ECEA1HN010S S ECEA1ES470	Electrolytic, 50V, 1μF Electrolytic, 16V, 33μF Electrolytic, 16V, 33μF Electrolytic, 16V, 33μF Ceramic, 50V, 0.001μF, ± 80% Electrolytic, 50V, 10μF Electrolytic, 25V, 47μF Ceramic, 50V, 0.001μF, ± 80% Non-Polar Electrolytic, 50V, 10μF Electrolytic, 25V, 47μF
CABINET and CHASSIS PARTS		
1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 [XL] 21 [EK] 21 [Other Areas] 21—1[EK] 21—1[XL] 21—1[Other Areas] 22 [XA] only 23 [XA] 23 [E] 23 [XL] 23 [Other Areas] 24 24 25 26 27 28 29 30 31 32 33 34 35 36 37 [EK, XL] only 38 39 40	 SYW523  SYW523—1 SUB69 SUB81 SBN993 SBC337—1 SBC339 SGU249 SGX7169 SGX7171 SMZ305 SDL51 SDL53 SDL55 SDL57 SDL59 SDL61 SUW1877 SUW1859 XCJ6P21D—A SKL249  QFC1207MA  QFC1205M  SJA88 SHR129 SHR131 SHR127  SJS9221 SGP2870—2A SGP2870—3A SGP2870—4A SGPH8040B  SKC690S  SKC690BB SHR301 SJS5519 SJS5807 SJS5421 SJS5327 RHR111 SHG6225 SHG649 SHG1603 SJF3207—5N SHG6063—1 SMN1635 SUV473 SJS6513 SJT347 SMXA65	Front Panel, Silver Front Panel, Black Coupling, Rod Coupling, Rod Knob Button, Power Switch Button, Selector Switch Glass Plate, Display Case, Display Holder, Display Lamp Plate, Reflector Transparent Plate Transparent Plate Transparent Plate Transparent Plate Transparent Plate Holder, Panel Fitting Holder, Panel Fitting Jack, Microphone Foot AC Cord AC Cord AC Cord AC Cord Bushing Bushing Bushing Socket, AC Outlet Rear Panel Rear Panel Rear Panel Rear Panel (With SGT26250) Cabinet, Silver Cabinet, Black Clamper Socket, 5 Pin Socket, 8 Pin Socket, 4 Pin Socket, 3 Pin Bushing, AC Cord Rubber Rubber Cushion, Power Rubber Terminal, Input Rubber Ornament, Cover Cover, Voltage Selector Socket, DIN Crip, Fuse Cover, Capacitor

Ref. No.	Part No.
SCREWS and NUTS	
N1 N2 N3 N4 N5 N6 N7 N8 N9	S XTS3+8BFN S XTB3+8BFZ S XSN3+6S S XWA3B S XTB3+8BFN S XTB3+8BFN S XTB3+8BFN S XWG3 S XTB3+10BF
N10 N10	S XTB4+8BFN S  XTB4+8BFZ
N11 N12 N13 N14 N15	S XNS12 S XTV3+10BF S XWG3 S XWG3+6BFZ S SNE4021
PACKING PARTS	
P1 [XL] P1 [EF] P1 [Other Areas]	SPG3765 SPG3767 SPG3763
P2 [XL] P2 [Other Areas]	SPS3029—2 SPS3029—4
P3 [XL] P3 [Other Areas]	SPS3031—3 SPS3031—7
P4 P4	

EXPLODED VIEWS

Description	
0.01μF, ± 5%	
0.0012μF, ± 5%	
1μF	
10μF	
1μF	
1000μF	
47μF	
1000μF	
47μF	
2200μF	
0.01μF, ± 80%	
33μF	
1μF	
1μF	
0.01μF, ± 80%	
33μF	
50V, 1μF	
1μF	
33μF	
33μF	
0.001μF, ± 80%	
10μF	
47μF	
0.001μF, ± 80%	
50V, 10μF	
47μF	

Ref. No.	Part No.	Part Name & Description
SCREWS and NUTS		
N1	S XTS3+8BFN	Screw, Front Panel
N2	S XTB3+8BFZ	Screw, Chassis
N3	S XSN3+6S	Screw, Power Switch
N4	S XWA3B	Washer, Power Switch
N5	S XTB3+8BFN	Screw, Chassis
N6	XTBS3+8BFZ1	Screw, P.C.B. Ground Terminal
N7	S XTB3+8BFN	Screw, P.C.B.
N8	S XWG3	Washer, P.C.B.
N9	S XTB3+10BFZ	Screw, Rear Panel
N10	S XTB4+8BFN	Screw, Cabinet
N10	S XTB4+8BFZ	Screw, Cabinet
N11	S XNS12	Nut, Microphone Jack
N12	S XTV3+10BFN	Screw, Foot
N13	S XWG3	Washer, Foot
N14	S XTS3+6BFZ	Screw, Front Panel
N15	SNE4021	Nut
PACKING PARTS		
P1 [XL]	SPG3765	Carton Box
P1 [EF]	SPG3767	Carton Box
P1 [Other Areas]	SPG3763	Carton Box
P2 [XL]	SPS3029-2	Pad, Front
P2 [Other Areas]	SPS3029-4	Pad, Front
P3 [XL]	SPS3031-3	Pad, Rear
P3 [Other Areas]	SPS3031-7	Pad, Rear
P4	○ SPP697	Polyethylene Bag, (Silver)
P4	■ SPP647	Polyethylene Bag, (Black)
P5	SGK1413	Label, Color
ACCESSORIES		
A1	SJP2129-5	Connection Cord
A2 [XA]	SQF11137	Instructions Book, Printed Matter
A2 [Other Areas]	SQF11135	Instructions Book, Printed Matter
A3 [XA] only	SJP5213-1	Plug



Service Manual

Space Dimension Controller

SH-8040

[PA], [PE]

Areas

- * [PA] is available in Far East PX.
- * [PE] is available in European Military.

Please use this manual together with the service manual for model No. SH-8040/(K) Order No. SD82012100C2.

CHANGES

■ REPLACEMENT PARTS LIST

- (1) Mentioned in this parts list are only those changed in Model No. SH-8040 for destination [XA] area.
- (2) Only silver types are available for this unit, and therefore, parts for black types are not used.

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks	
	SH-8040 [XA]	SH-8040 [PA, PE]				
CABINET and CHASSIS PARTS						
21	⚠	SJA88	RJA52Z	AC Cord	1	
ACCESSORIES						
A2		SQF11137	SQF11139-1	Instruction Book	1	
A3		SJP5213-1	RJP120ZBS	Plug	1	

Technics

Panasonic Tokyo
Matsushita Electric Industrial Co., Ltd.
1-2, 1-chome, Shibakoen, Minato-ku, Tokyo 105 Japan

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

REPLACEMENT PARTS LIST

- Notes:**
- Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
 - Important safety notice:
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

- The "S" mark is service standard parts and may differ from production parts.
- The encircled numbers in the column of description stand for the quantity per set.

Ref. No.		Part No.	Part Name & Description
INTEGRATED CIRCUITS			
IC101		SVINJ4559DSM	IC, Mic Amplifier
IC201 ~ 204, 302		SVINJ4558DSM	IC, Buffer, Mixing, Phase Shifter & Matrix
IC301, 603		SVINJ4558DMM	IC, Noise Reduction & Detector
IC303		MN3007	IC, BBD
IC304		MN3101	IC, BBD
IC601, 602		SVIIR2E01	IC, LED Drive
IC604		AN6875	IC, Comparator
TRANSISTORS			
Q201, 202, 301 ~ 305, 701		2SC1815-Y	Transistor, Buffer, LPF & Switching (Product Part No. 2SC1815-Y or GR)
Q501	S	2SC1384AR	Transistor, Regulator (Product Part No. 2SC1384-AR or AQ)
Q502		2SA684-RNC	Transistor, Regulator (Product Part No. 2SA684-RNC or QNC)
Q601 ~ 605	S	2SA683	Transistor, Switching (Product Part No. 2SA683-Q, R or S)
Q702		2SA1015-Y	Transistor, Switching (Product Part No. 2SA1015-G, R or Y)
Q703, 704		2SK301-S	Transistor, Switching [FET] (Product Part No. 2SK301-S or R)
DIODES			
D301 ~ 303, 613	S	MA162A	Diode, Bias Supply & Detection (Product Part No. MA150)
701, 702 ~ 705			
D501, 502	S Δ	SVDSR1K2	Rectifier
505 ~ 508			
D503, 504		SVDMZ316A	Diode, 16V Zener
D601 ~ 608, 611		LN317GP	Light Emitting Diode, Green
D609, 610		LN417YP	Light Emitting Diode, Yellow
D612		SVDMZ306A	Diode, 6V Zener
COIL and TRANSFORMERS			
L301		SLQX393-1Z	Coil, Choke
T1	Δ	SLT5J167-W	Transformer, Power Source
VARIABLE RESISTORS			
VR101, 301		EVHNA542B14	Mic Level & Echo Control, 10k Ω
VR201		EWKH3A054B14	Ambience Control, 10k Ω
COMPONENT COMBINATION			
Z507		SXRF5203ZSM	Component Combination, 0.01 μ F x 2
FUSES			
F1	Δ	XBA2C08TR0	Fuse, 800mA, 250V
F2	Δ	XBA2C03TR0	Fuse, 300mA, 250V
SWITCHES			
S1 ~ 3		SSH3027	Switch, Tape Effect, Dimension
S4		SSH165	Switch, Echo
S5	Δ	ESB90619S	Switch, Power
S6	Δ	ESE3787	Switch, Voltage Selector
LAMP			
PL601 ~ 606	Δ	XAMR94Q17	Lamp, 8V, 150mA
CABINET and CHASSIS PARTS			
1		SYW523	Front Panel, Silver (1)
2		SUB69	Coupling, Rod (1)
3		SUB81	Coupling, Rod (3)
4		SBN993	Knob (3)

Ref. No.		Part No.	Part Name & Description
5		SBC337-1	Button, Power Switch (1)
6		SBC339	Button, Selector Switch (4)
7		SGU249	Glass Plate, Display (1)
8		SGX7169	Case, Display (1)
9		SGX7171	Holder, Display Lamp (2)
10		SMZ305	Plate, Reflector (2)
11		SDL51	Transparent Plate (1)
12		SDL53	Transparent Plate (1)
13		SDL55	Transparent Plate (1)
14		SDL57	Transparent Plate (1)
15		SDL59	Transparent Plate (1)
16		SDL61	Transparent Plate (1)
17		SUW1877	Holder, Panel Fitting (1)
18		SUW1859	Holder, Panel Fitting (1)
19		XCJ6P21D-A	Jack, Microphone (1)
20		SKL249	Foot (4)
21	Δ	RJA52Z	AC Cord (1)
21-1		SHR127	Bushing (1)
22	Δ	SJS9221	Socket, AC Outlet (1)
23		SGP2870-2A	Rear Panel (1)
24		SKC690S	Cabinet, Silver (1)
25		SHR301	Clamper (1)
26		SJS5519	Socket, 5 Pin (3)
27		SJS5807	Socket, 8 Pin (1)
28		SJS5421	Socket, 4 Pin (2)
29		SJS5327	Socket, 3 Pin (1)
30		RHR111	Bushing, AC Cord (1)
31		SHG6225	Rubber (1)
32		SHG649	Rubber Cushion, Power (1)
33		SHG1603	Rubber (1)
34		SJF3207-5N	Terminal, Input (1)
35		SHG6063-1	Rubber (1)
36		SMN1635	Ornament, Cover (1)
38		SJS6513	Socket, DIN (1)
39		SJT347	Crip, Fuse (4)
40		SMXA65	Cover, Capacitor (1)

Ref. No.		Part No.	Part Name & Description
SCREWS and NUTS			
N1	S	XTS3+8BFN	Screw, Front Panel (2)
N2	S	XTB3+8BFZ	Screw, Chassis (2)
N3	S	XSN3+6S	Screw, Power Switch (2)
N4	S	XWA3B	Washer, Power Switch (2)
N5	S	XTB3+8BFN	Screw, Chassis (2)
N6		XTBS3+8BFZ1	Screw, P.C.B. Ground Terminal (1)
N7	S	XTB3+8BFN	Screw, P.C.B. (2)
N8	S	XWG3	Washer, P.C.B. (2)
N9	S	XTB3+10BFZ	Screw, Rear Panel (4)
N10	S	XTB4+8BFN	Screw, Cabinet (4)
N11	S	XNS12	Nut, Microphone Jack (1)
N12	S	XTV3+10BFN	Screw, Foot (4)
N13	S	XWG3	Washer, Foot (4)
N14	S	XTS3+6BFZ	Screw, Front Panel (1)
N15		SNE4021	Nut (3)
PACKING PARTS			
P1		SPG3763	Carton Box (1)
P2		SPS3029-4	Pad, Front (1)
P3		SPS3031-7	Pad, Rear (1)
P4		SPP697	Polyethylene Bag (1)
P5		SGK1413	Lavel, Color (1)
ACCESSORIES			
A1		SJP2129-5	Connection Cord (1)
A2		SQF11139-1	Instructions Book, Printed Matter (1)
A3		RJP120ZBS	Plug (1)